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JAGUAR IN MOTORSPORT



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JAGUAR IN MOTORSPORT



Welcome to issue five in the Jaguar Memories series, and it's a goody – Jaguar in Motorsport. No, we haven't lost our heads over the last few months and decided to tackle Jaguar's involvement in motorsport in one go, what we have done, and to save me greying any more, is put together a collection of features that guide you through some of the highlights (and not so high) of when Jaguar was out on the track (or sand – see p92).

Pulling us smoothly away on our overview journey, we feature two chaps who, in 1947, took a 3½-litre Jaguar through Europe to enter the famous Monte Carlo Rally. With thick snow and mountain passes to contend with, the pair made it to the principality in one piece, as did the car.

Further into the bookazine, we feature Jaguar's exploits at Le Mans. As the main cover car indicates, we have a detailed feature on the development and subsequent victories of the XJR-9 cars. However, like the BBC programme *Who do you think you are?* those 80s Le Mans cars can trace their lineage back to 1951 and the C-Type racers, who took the chequered flag at the first time of asking. Such was the furore of the victory, that when Jaguar took the new D-Type to France, the expectations were at fever pitch. The team didn't disappoint, winning the race in 1955, 56 and 57 for good measure.

With the arrival of the E-Type another Le Mans victory remained elusive. That said, developing track-focussed cars did not, and with the likes of the lightweight and

low-drag versions being campaigned, the E-Type enjoyed victories in other arenas around the world.

Moving into the 1970s, Jaguar now a part of British Leyland, got behind the Broadspeed XJ12 project. Flared arches, huge tyres and a powerful V12 engine propelled the coupe around the track at exceptional speeds. However, weight and reliability was its downfall and the old saying "what could have been" was applied to this moment in history.

Things did improve though – enter Tom Walkinshaw and TWR. Enjoying much success with an XJ-S, Walkinshaw used his years of racing experience to transform the results on track. Read about the man himself on p70 and learn how Tom helped develop the cars that returned the Le Mans crown to Coventry once more.

Racing in the future, and with Greta's eyes looking on, we leave the high-octane behind and give you an insight into the world of Formula E. Held on fast-paced street circuits, teams battle it out – Jaguar included – all the while being kind to polar bears and penguins alike.

With all this seriousness however, we do round this issue off with a small helping of bonkers! Take one MkX that's been resting in a field for years, throw in a V12 and take it to the Sahara – what could possibly go wrong!

Enjoy the issue everyone, and keep safe.

Paul Sander
Editor, Jaguar Memories

JAGUAR MEMORIES

A look at the cars, histories and development stories of some of the most iconic Jaguar racers.



JAGUAR MEMORIES

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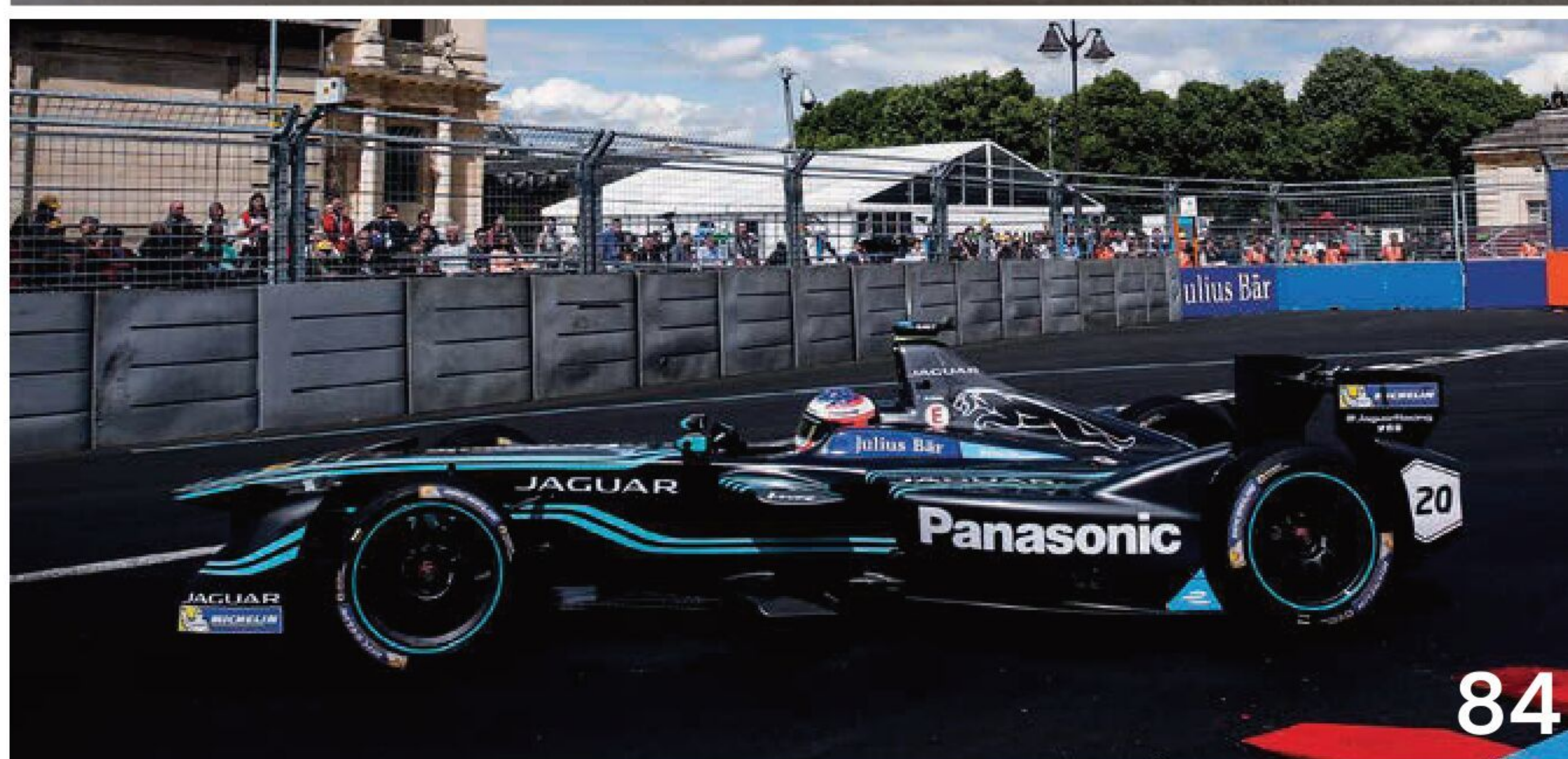
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"Press on regardless!"

Thanks to Mike Couper's photo-album and his and Rodney Walkerley's books, we trace an epic journey to Monte Carlo made by a 3½-litre Jaguar saloon in 1947.

Words: Paul Skilleter

January is traditionally the month of the Monte Carlo Rally. It's still an important event today, but in years past it was a highlight of the motor sport calendar, ranking close to Le Mans in status – at least in Britain and Europe. The attention it was paid by the press was enormous: the motoring magazines devoted pages to previewing the rally before reporting it in great detail. Even the daily papers would carry a series of major reports on the crews as they battled across the continent, describing their progress as they attempted to meet strict average speed targets despite, very often, ice and heavy snow. En route reports crackled over the Home Service, provided by broadcasters such as Raymond Baxter. In short, the Monte Carlo Rally captured the imagination of the public like no other rally.

Few other motoring events have such a long history either, because last year the 'Monte' celebrated its centenary. But it hasn't enjoyed an unbroken run, as there were no rallies between 1913 and 1923, nor from 1940 to 1948. Which is where Michael Couper, Rodney Walkerley and a 3½-litre Jaguar come in...

Couper was a Hillman dealer in St Albans and a keen amateur driver who had driven Talbots at Brooklands and a Hillman Minx in the 1939 Monte. Rodney Walkerley was an even better-known figure in motoring circles,

having been The Motor magazine's sports editor since pre-war times. Like many enthusiasts immediately after WW2, Rodney bemoaned the failure of the Monte Carlo Rally to resume in a Europe that was in the early stages of recovering from the conflict, and which was still beset with food and fuel shortages. Then in December 1946, inspiration arrived.

"The idea came to me," he wrote later, "that, even if there were to be no Rally [in 1947], there was nothing to stop a man running over the pre-war official Rally routes on his own, keeping to set Rally averages all the way, just for fun." Accordingly he rang up his 'old friend' Mike Couper who instantly agreed to be his co-driver. Mike went on to suggest, "Why wear out your own car, old boy? See if you can borrow one."

BILL LYONS OBLIGES

Walkerley pondered on which car to drive on this private Monte, "and somewhat naturally, as I had covered the last pre-war Rally in my own 3½-litre Jaguar, I first approached Mr Lyons, somewhat diffidently. His answer was prompt and affirmative. We could certainly have a car... "For a fortnight we waited while the earmarked 3½-litre Jaguar saloon moved steadily down the assembly line towards completion and for a few days more while enthusiasts from the works ran the car in for 300 or

400 miles during all-night drives. Finally, brand new, perfectly standard, shining in its suede green cellulose, the Jaguar was handed over to us at Coventry." And by no less, it seems, than chief engineer Bill Heynes and his right-hand man, designer draughtsman Claude Baily.

Ordinarily the traditional John O' Groats starting point might have been chosen but the time required to reach Scotland, plus the petrol needed, persuaded the pair to start from London. 'D-Day', as Rodney put it, would be Monday, 27 January,





and as luck would have it, Britain and much of Europe became enveloped in snow. "The stage was being set for real Rally conditions," affirmed Rodney, and when the pair fought their way to Dover, they discovered the intended ferry couldn't dock because of gale force winds. Finally they managed to get the car onto a train ferry at Folkestone, though they themselves had to take another ship to Calais, where they were reunited with FVC 879.

The run to Monte Carlo began as they left Calais at 3pm. "Snow was

THE CAR

Jaguar Heritage records show that FVC 879 was a 3½-litre Jaguar saloon in suede green, chassis number 610669. Completed in January 1947, it was designated as a press car. It was sold secondhand to Ritchies and according to the registration cancellation card, was last reported in Renfrewshire in 1963 and was then broken up. The 3½-litre saloon was built from 1938 to 1949 (war years excepted), when it was replaced by the similarly-engined Mk V.



MONTE CARLO 1947

already patchy and quite thick on the edges of those fine long roads that encourage one to get on with it," wrote Mike Couper in his account. "Within a few miles signs of war devastation were conspicuous, with burnt-out tanks, blown-up bridges and filled-in bomb craters much in evidence." The main stages of the route were to be Boulogne to Le Mans (234 miles), Nantes (113 miles), Bordeaux (208 miles), and Pau (127 miles). The target average speed up to this point would be 25mph including all stops. This would rise to 32mph from Pau to Toulouse (122 miles), Rodez (98 miles), then, "over the slow, eternally curling mountain passes through Le Puy to Lyons" (222 miles), Grenoble (60 miles), "and the final stage over the Winter Alpine Route down to Nice and Monte Carlo (224 miles)." This would total 1,464 miles. In deference to the newness of the engine, the pace was restrained as they left Boulogne at 3.40pm, 40 minutes behind schedule as they had intended to dock at Boulogne itself. The road was free of snow although it lay on the verges, but the temperature was dropping. Couper described an interesting moment when, "entering Montreuil up the cobbled winding hill, Rodney took his eyes off the road for a moment to show me a quaint iron bridge that led to the Chateau where

Rodney Walkerley, as sports editor of *The Motor*, had covered events pre-war in a 3½-litre SS Jaguar saloon and was well known at Jaguar. He is pictured here in January 1947 at Foleshill when collecting the new saloon (the stairs lead to William Lyons' office; the distinctive sun-ray doors are now preserved in the Jaguar Heritage museum).



Rommel had his headquarters at the time of the Normandy landings, and in a flash we were pointing north again. It was a large sheet of ice from an open drain..."

No damage was done and they made Rouen in a minute under three hours, averaging 45mph and declaring the car now 'run in'. In the town they filled up with petrol including the three jerrycans, carried in the boot as a reserve in case they couldn't locate a garage during some of the night stages. They had coupons for 33 gallons at 5s 6d a gallon; without coupons the price was about £1 a gallon... "So, with

27 gallons aboard, we left Rouen, and with lights on set off further south-west." One hazard was blown bridges, necessitating detours onto secondary roads with indifferent sign-posting. Wrote Rodney, "It was very, very cold. The road was covered with a thin, grey veil of frost. We were very hungry. We drove through remote villages where occasional red-lit windows spoke of warm fires and hot food."

WAR-TIME DETRITUS

The pair managed to get food in the town of Bernay and "a bottle of Beaune helped the blood back to normal temperature and we emerged stronger, if not better, men. On and on we bowled, as hour succeeded hour, down long, tree-lined roads sparkling with frost like diamond dust... The Jaguar was armed with double-dip, which meant that both the powerful Lucas P100 lamps dipped straight down, and the French didn't like it. In the end we had to do a juggling act by switching out the headlamps and switching on the fog lamps, which were cocked over to shine at an acute angle to the right. In between battling with lamps, we noticed at intervals all down the road, the derelict remains of German tanks at weird angles in the ditch."



The handover at Jaguar's Foleshill, Coventry plant.



Getting the Jaguar onto the train ferry over rails made slippery with snow was a nail-biting exercise!

They made Le Mans by 11.15pm, ahead of schedule, and gratefully took on board refreshment at a little café-bar that was still open in the town. "Into that steamy warmth we stepped gratefully and gulped boiling hot glasses of black café-cognac, while we explained to the astonished habitués why on earth we were driving all night to Bordeaux." Having filled their Thermos flasks (no controls to collect food and fuel as in the real rally), the pair were seen off by the locals, "and many were the words of awe and delight at the sight of the big Jaguar, gleaming at the kerbside."

The route from Le Mans towards Tours took them down the Terte Rouge-Mulsanne section of the Le Mans circuit, "where I had driven a Bentley in 1931", recorded Couper. New half-kilometre posts were in place "as if for use this year," but at the Mulsanne corner "the course now runs through a gigantic prisoner-of-war camp, surrounded by high wire and dotted with searchlight and machine-gun towers." Mike Couper reckoned they could make Bordeaux easily with the fuel on board, since the car had averaged 18.9mpg over the 256 miles from Rouen – "which, for a six-cylinder 3½-litre is pretty good", Rodney thought. "The Jaguar was indeed going beautifully, motoring exactly as its

appearance suggested it ought – and it is a very beautiful and imposing vehicle, you have to admit.

"The gearbox, which had been a little stiff with newness, was freeing up nicely. The gear ratios were spread at exactly the right intervals, one leading to the next precisely as it should...

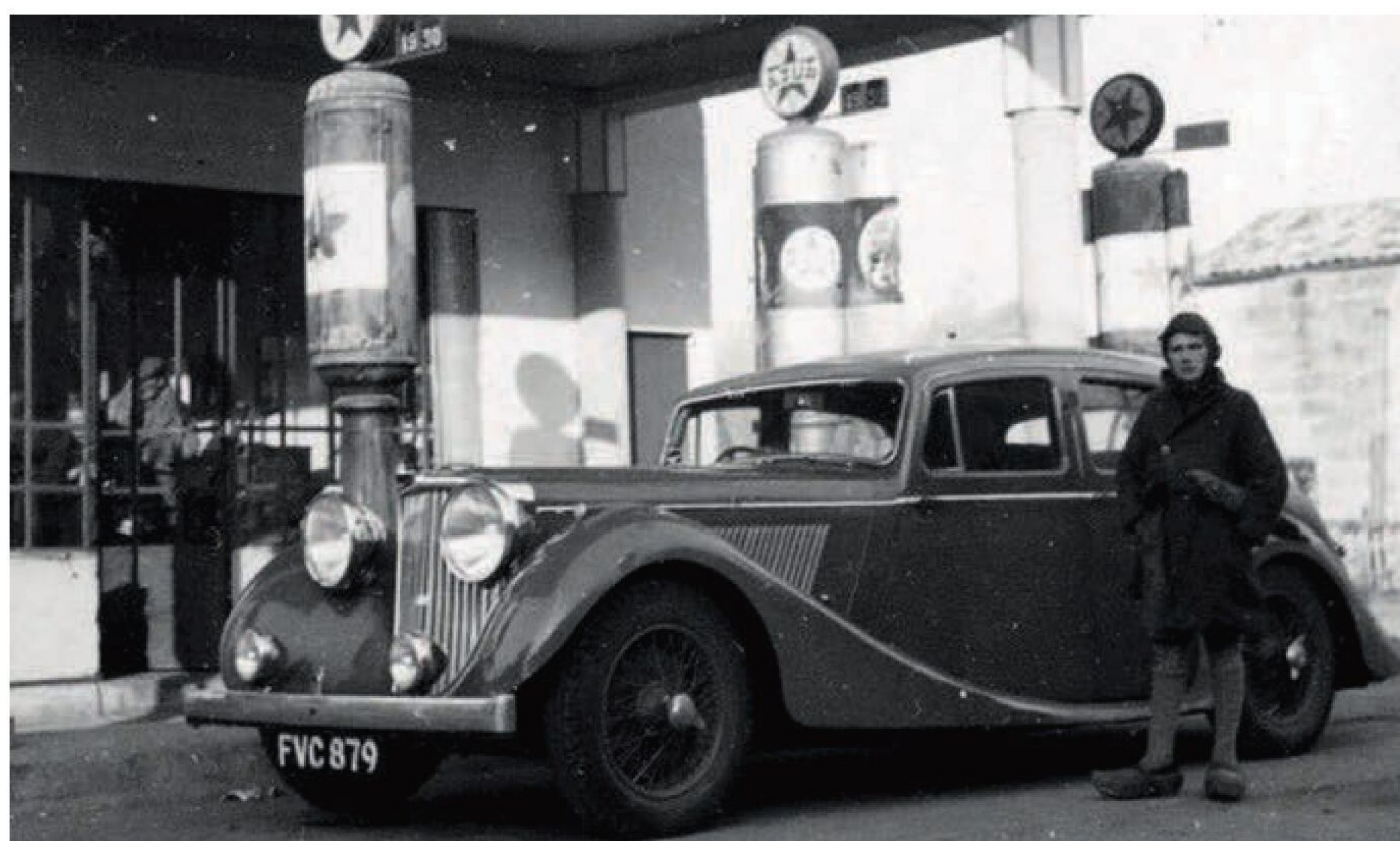
"As to speed, the 125 potential bhp was very patently under that long bonnet, although we cruised at only a steady 60-70mph in deference to the newness of the engine... The suspension was firm but supple and the car rode the highway like a train. Exactly what sort of surface we were whizzing over we didn't really know,

and neither of us felt inclined to get out to investigate for fear of what we should find..."

ON TO THE MASSIF CENTRAL

Some way past Tours on the N10 a ticking from the petrol pumps indicated that a refill from the jerrycans was required, then on to Bordeaux, which they reached at 7.15am on 28 January. A bath, shave and breakfast at a hotel, then by 10am they left Bordeaux, deciding (because of doubts about getting petrol vouchers) to shorten the official route by 140 miles and head directly for the "endless ranges" of the Massif Central. Their average speed now needed to be 32mph, which, as they tackled the 222-mile stage from Rodez to Lyons over a succession of passes, "was going to take some averaging."

Increasingly heavy snow added to the drama, but they reached Albi at 3.30pm and filled both the 14-gallon tank and the jerrycans (which held 12 gallons). Heading for Rodez, "the snow was really thick and we were driving one-way width between banks of snow." After Rodez the mountain passes began. "The mountains hung sullen above us, thickly wooded and loaded with snow. On one side of the ever-twisting road were terrifying depths into which we glanced and looked



28 January in France, filling up outside Bordeaux.

MONTE CARLO 1947



A brief halt south of Bordeaux on a typical tree-lined road.

no more... It was impossible to drive without a certain amount of sliding, for we were going as fast as we could, hounded on by the thought of that awful 32mph schedule, and we were relying more and more on the grip of the Dunlops and the steadiness of the brakes...

"Then night closed down like a lid... and now we drove snug and warm, our heater going flat out, in a blue fug of cigarette smoke, to which we were now impervious. The powerful headlamps alternatively floodlit the cliff-side as we hairpinned left or shot out like searchlights across depths measureless to man when we switched to the right."

On Tuesday 28 January they reached Mende by 7.55am, took on food and fuel, then headed for Le Puy, the 65 miles including the Col

de St Pierre Plantes. "The next two hours were a nightmare," related Rodney, especially as they took a wrong turning and had to retrace their steps. "The snow was deep enough to drag noticeably on the car and flatten our front numberplate, and big flakes were falling faster and faster... I had gloomy visions of running smack into a drift and freezing to death."

They reached Le Puy 34 minutes late, at 12.20am, and gained Lyons at approaching 3am, now 90 minutes behind schedule. Exhausted, they found a small hotel "and within minutes we were in deep swoons on hard beds in rooms below freezing point." At 8am on Wednesday 29 January, fed and fuelled, they set off for Grenoble, reaching it at 9.38am. "Then began the last, long stage of



the journey, the 224 miles over the Winter Alpine Route", which involved tackling several passes, "the worst of which was the Col de Leques, which had to be done in 14mins 24secs."

It was tough going but they achieved Sisteron by 1.52pm, though were then delayed by deep snow and lorries that they couldn't overtake until they were waved by at a level crossing. Rodney was at the wheel for the start of the Col de Leques section, with Mike working the stopwatch. "Presently we began to run through little drifts, ploughing our way with the snow cascading back all over the screen... well, I failed that section. I drove as fast as I could without sliding off into nothing. At times I could get up to 25mph. At others I was down to rest with spinning wheels."



The Jaguar doesn't look too old-fashioned compared with the mainly pre-war cars in the streets.



29 January, thick snow; the Jaguar pauses in the late afternoon.

BURIED IN SNOW...

Mike Couper took over for most of the descent. "Immediately our speed rose. There began to be appreciable

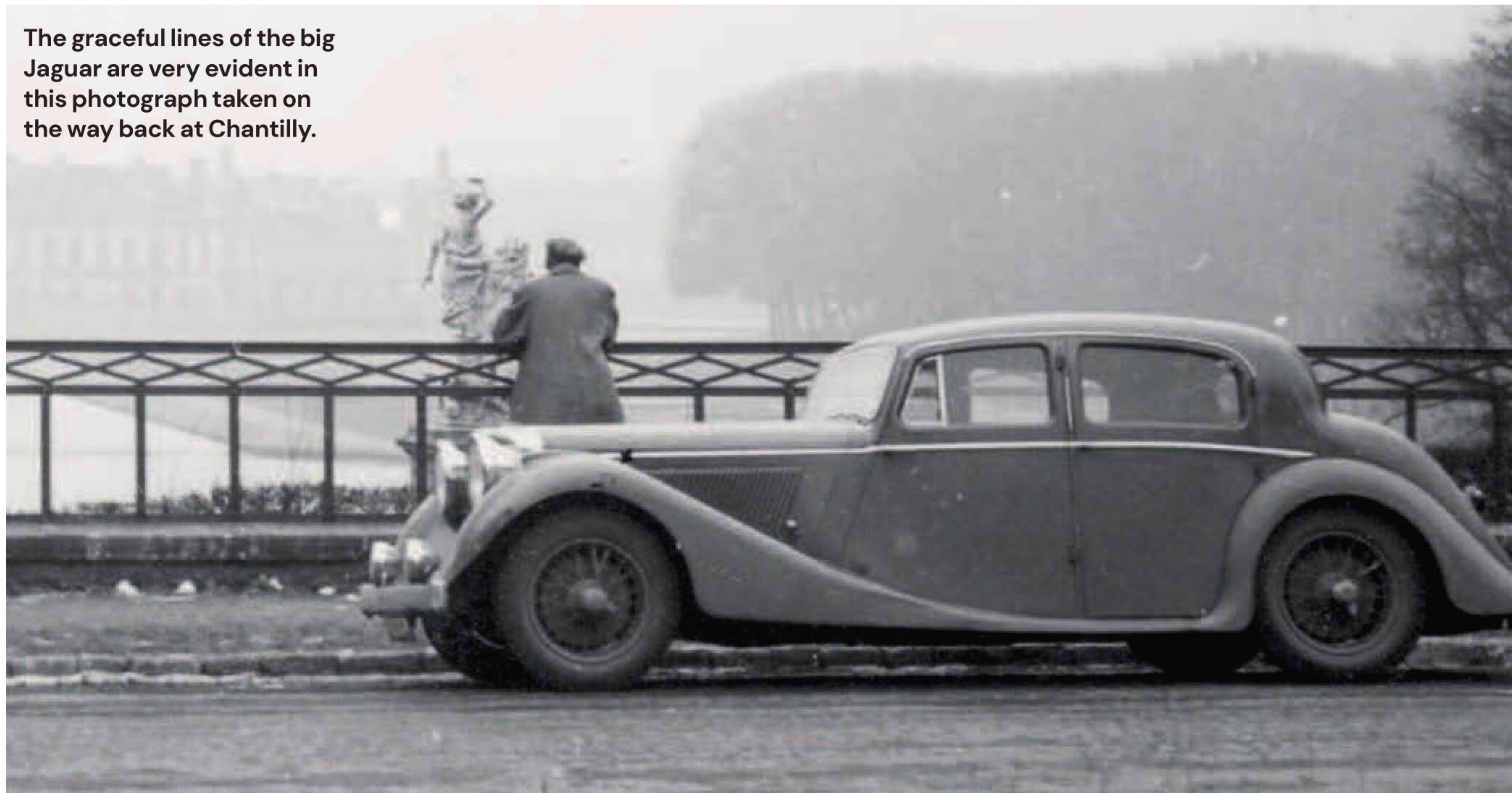
straights between the series of zig-zags and Mike took the Jaguar up to 55, 60, 65... braking as if on dry concrete. Then, of course, it had to

happen. We came flashing down a slight incline towards a right-angled curve. Mike braked... the car slid onwards. He fought the wheel but it was no use. We sloshed sideways off the road and buried the bonnet deep in snow at an angle of about 30 degrees. 'Sorry', said Mike."

However, 20 minutes digging and the car was extracted "without a mark." On they went, leaving the mountains and reaching Nice in darkness. Mike handed over the wheel to Rodney. "You take it now," he said. 'It was your silly idea from the start, so you'd better finish it.'" Slowed by traffic, they finally crossed into Monaco at 7.25pm "and came out upon the Condamine, where the Rally used to finish. We bowled on up the slope to the Casino, circled the gardens, and, at 7.30 precisely,

MONTE CARLO 1947

The graceful lines of the big Jaguar are very evident in this photograph taken on the way back at Chantilly.



we pulled up outside the Hotel Metropole, 2 hrs 15 mins late on our original schedule. However, we had got through, which had seemed highly improbable at times and we had covered our 1,310 miles in 52 hrs 15 mins, and we felt well satisfied...

"I have no space to describe worthily the manner in which we were welcomed and feted by the Automobile Club of Monaco and the following evening we were the guests of the entire committee at a gala at the grand salon of the International Sporting Club. We had, it appeared, been given up for lost in a snowdrift around Rodez.

"The Jaguar, of course, aroused immense interest, and wherever we parked (it having been beautifully washed and polished) small groups assembled and gave vent to expressions of approval.

"Only a very good car could possibly have got through under the really bad conditions we encountered, and the great power of the Jaguar was at a premium at forcing its way at low rpm in second and third gears over the snowbound passes without impossible wheelspin. Of course, we were never able to

use anything like maximum speed, although, on the home run, we speedometered an easy 95mph with revs in hand, but even thrashing the engine as hard as we could up the snowy passes, the thermometer never went beyond 76 degrees.

"We never had the slightest trouble with any part or component, and no tool was touched from start to finish. The Jaguar returned to this country after a drive back over snow and ice, the whole way smooth, silent and without a hair out of place, purring through the slippery London streets

as if we had merely been to Brighton and back."

So ended this epic sortie to Monaco in a car which, if by 1947 was distinctly antiquated in design, was still remarkably efficient. Those who say that the rumoured team of factory-prepared 31/2-litre saloons would undoubtedly have been potential Monte Carlo Rally winners might not be far off the mark. But as it was, Jaguar's first, and to date only, 'Monte' victory had to wait until Ronnie Adams' MkVII delivered the goods in 1956.

The palm trees of Monte Carlo make a vivid contrast to the snowy passes the Jaguar had survived the day before.

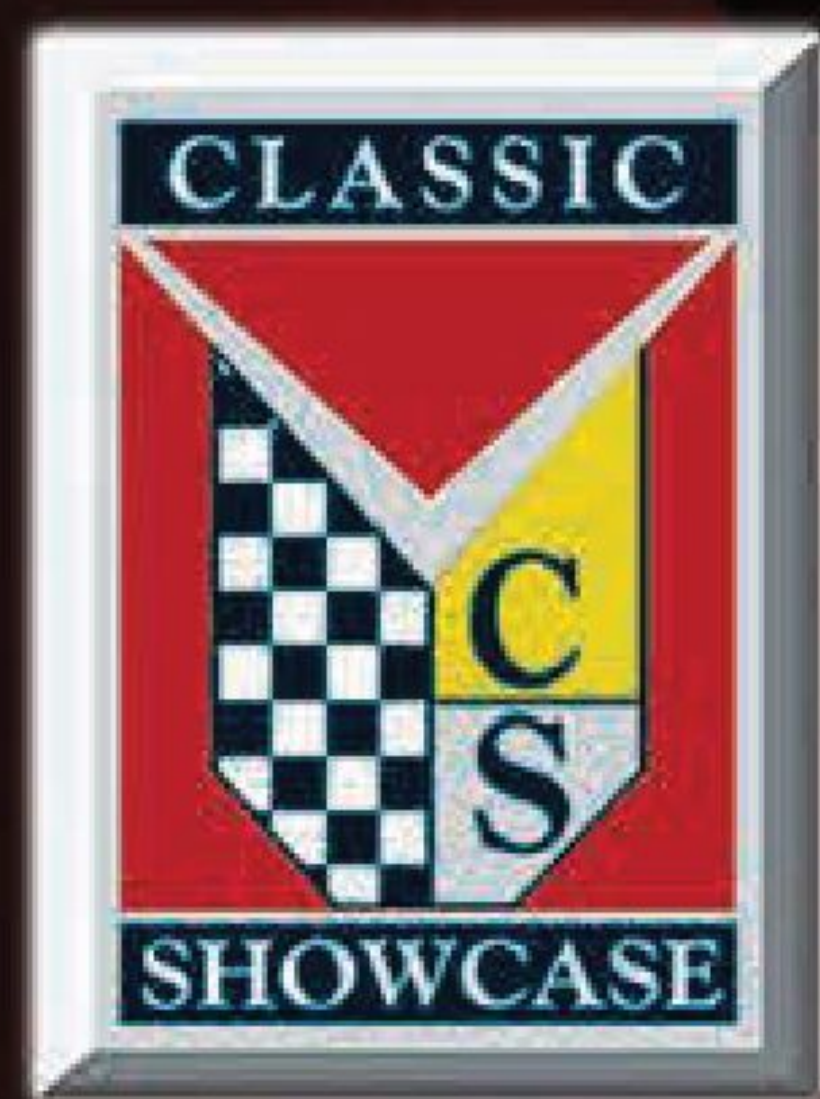


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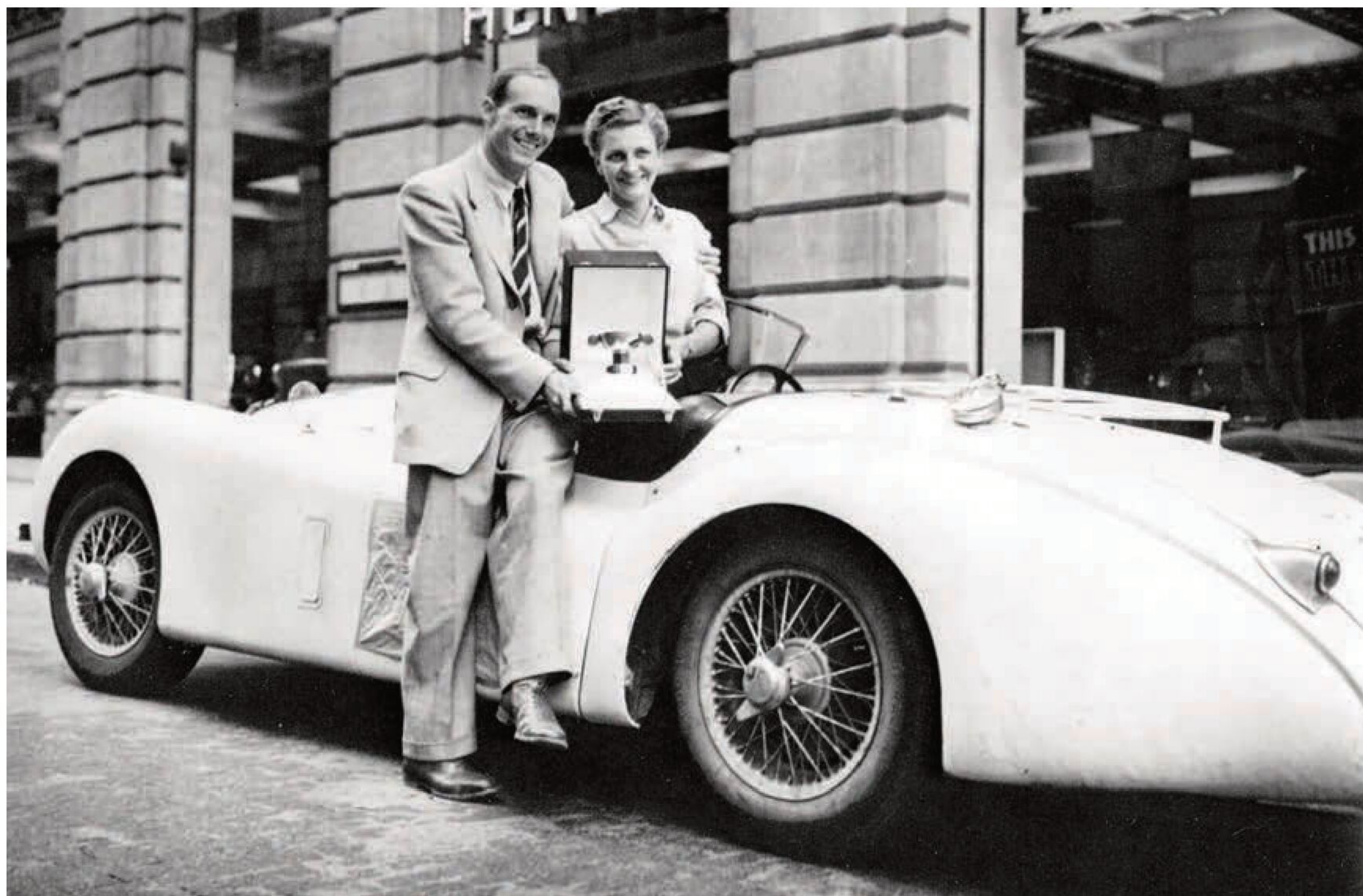
Going for gold

It was always a sore point for Ian and Pat Appleyard that Jaguar's Le Mans exploits seemed to eclipse their rallying efforts. But while it is true that Le Mans in the 1950s received more

worldwide recognition than even the most important European rallies, the Appleyards' achievements were remarkable in their own right.

The pinnacle of their successes

was without doubt winning the first Alpine Gold Cup ever awarded, gained by virtue of three consecutive penalty-free runs in this very tough event. The car used in the 1950 rally



Ian and Pat Appleyard outside Henley House in London, posing with NUB 120 and their newly-gained Alpine Gold Cup. Both car and cup are now in the Jaguar Heritage collection.



was the faithful NUB 120, veteran of two previous penalty-free runs in the Alpine and then charged with the very difficult feat of obtaining a third. It was now fitted with wire wheels and self-adjusting brakes – although the latter caused a scare in France when, prior to the start of the rally, Ian thought they were malfunctioning. This required a dash back from Marseilles to have them seen to;



Undoubtedly the most famous picture ever taken of NUB 120 – or perhaps of any XK120. The photographer was George Moore of The Motor wielding a Leica. As Andrew Whyte remarked, George was in the right spot at the right time during the 1950 Alpine. The location is the Forka Pass.

ALPINE GOLD CUP



A great informal portrait of Ian and Pat Appleyard dating from 1953. Also grubby but happy are fellow Jaguar XK rallyists Fraiken (left) and Gendebien. The car behind is probably RUB 120, the steel-bodied car which replaced NUB 120 that year.

nothing was found to be amiss at the Coventry works and luckily the Appleyards had set out early for a few days' holiday so they recrossed the Channel and still reached the start in time. "That was the end of my holiday!" Pat told me.

The aim was not to win the event or set a fastest time on any of the hill climbs but to avoid losing road marks – deducted for lateness at controls, for example – on the way round. This placed even more reliance on Pat (William Lyons' eldest daughter) for precise timing and navigation, but she did not fail and thanks to Ian's masterful car control and the speed, endurance and handling of the XK120, they reached the end of the event with no lost marks. They finished fourth overall and second in class as well. It was a truly great achievement and well worth remembering 60 years later.

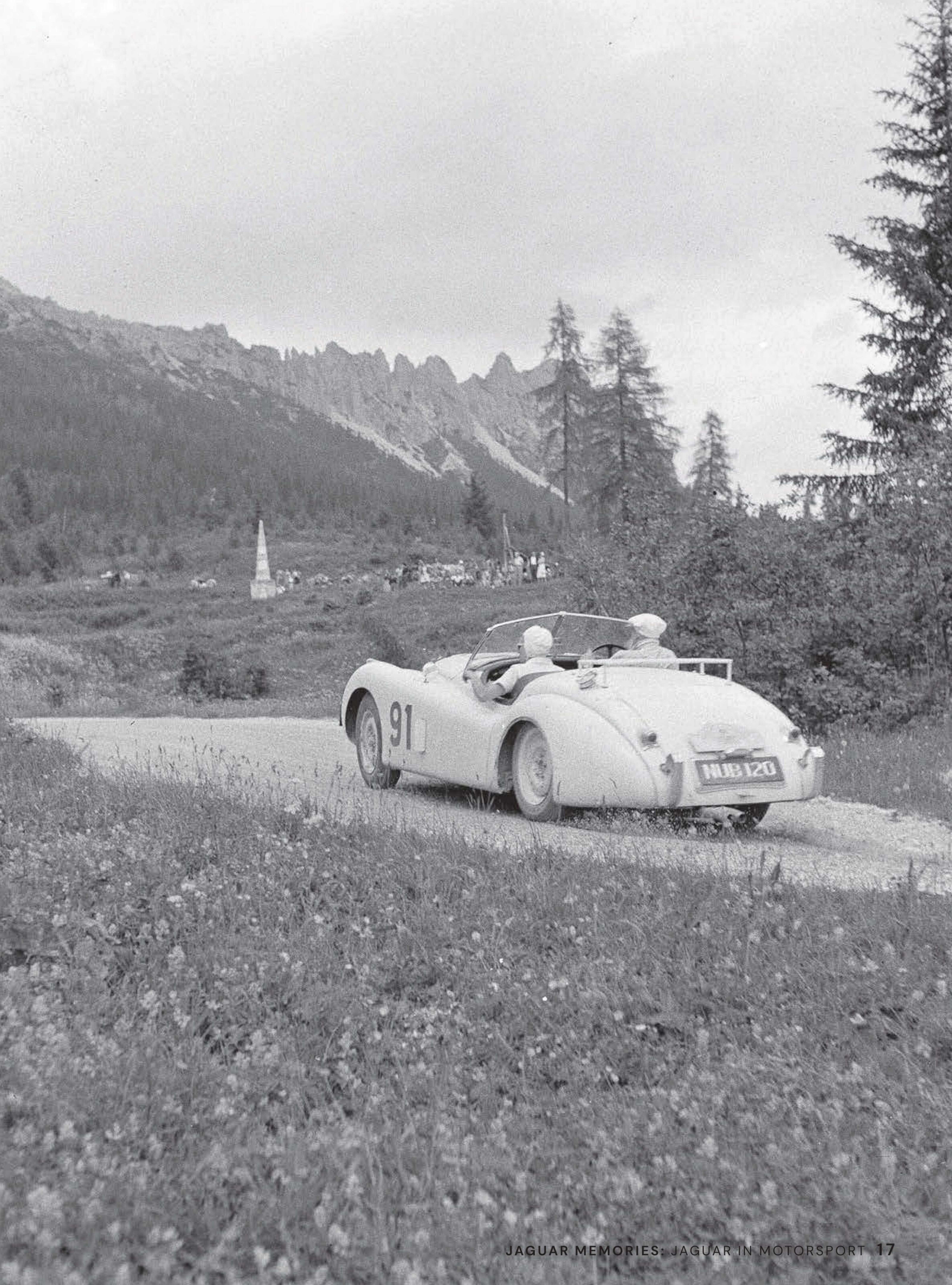
NUB 120 halts at a night control during the 1950 Alpine; at this stage it still carries the non-original (and as it turned out, unnecessary) vents which Ian had put in the bonnet.



Pat Quinn, as she now is, with son Michael and the famous old XK120, photographed in the mid-2000s on her farm in Gloucestershire.



Until very recently NUB 120 has been used quite intensively on various events, including several Mille Miglia retrospectives. Here Norman Dewis is the driver.



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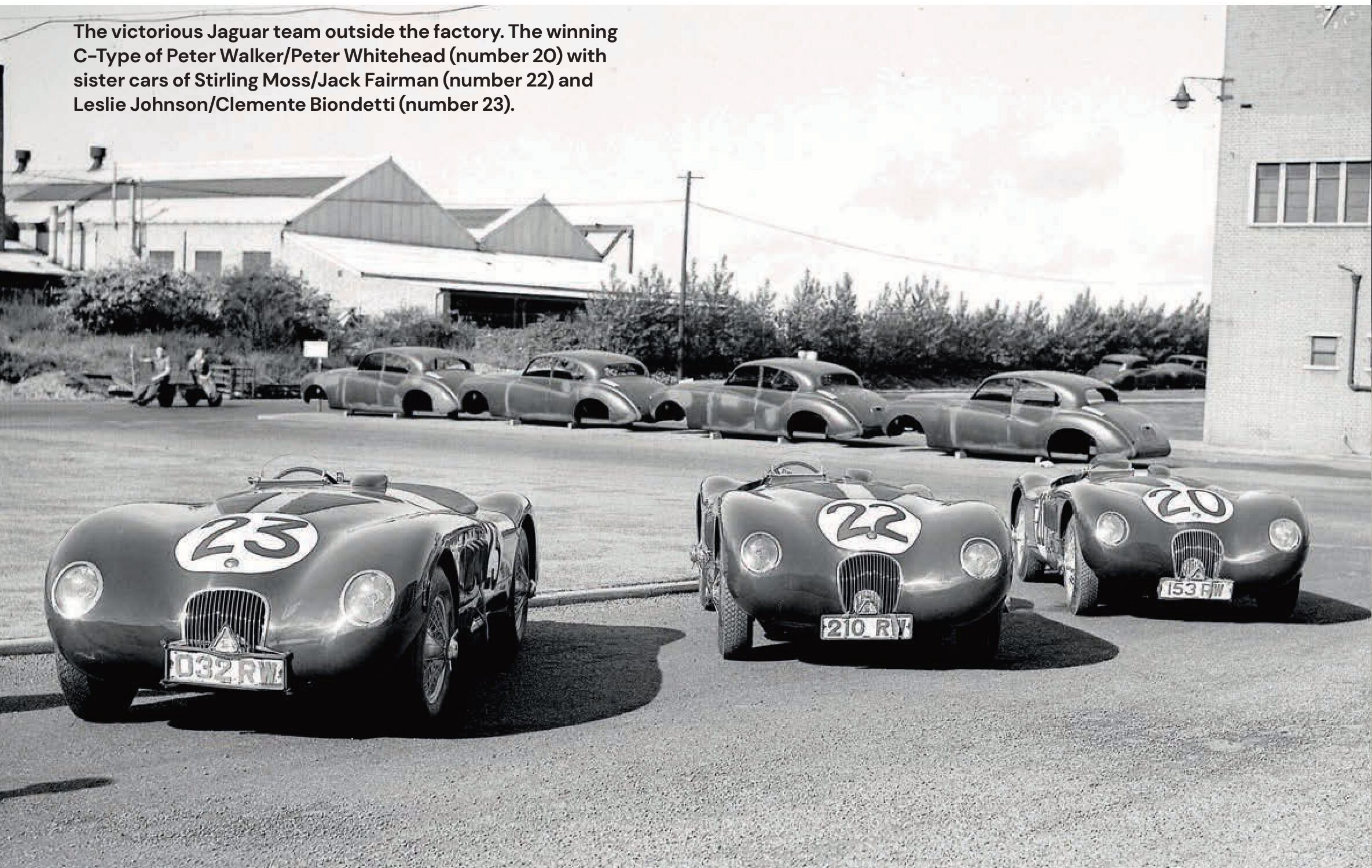
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LE MANS, 1951

The victorious Jaguar team outside the factory. The winning C-Type of Peter Walker/Peter Whitehead (number 20) with sister cars of Stirling Moss/Jack Fairman (number 22) and Leslie Johnson/Clemente Biondetti (number 23).



A great British victory

Imagine arriving at Le Mans today with a car no one had seen before. Then imagine that same car winning... Sounds improbable – but that's just the trick Jaguar pulled in 1951 with the C-Type.

Words: Paul Parker

Post-war Britain was a world of collateral damage from the Second World War, enforced austerity, poverty, restrictions and rationing with worn out 1930s cars, some warmed over new versions of the same and few genuine post-war designs. So the apparently unexpected appearance of the new Jaguar C-Type in 1951, with Autosport confidently predicting that modified XK120s would be fielded at Le Mans (in fact William Lyons had ordered the construction of three 'lightweight' XKs designated LT1, LT2 and LT3),

came as a surprise to many. This despite the fact that the XK120Cs, or C-Type as they became, were driven on the roads near the factory and had been tested at Lindley (now better known as MIRA) and Silverstone with Stirling Moss, Peter Walker and team manager 'Lofty' England doing the driving. This then was to be standing up and counted, unlike 1950 when the three XK120s were works prepared but privately entered lest things went badly awry, and William Lyons absented himself by attending the Isle of Man TT races.

LE MANS BY ROAD

As was to become familiar Jaguar practice, the three C-Types arrived by road under their own steam at the team's base, the Hotel de Paris and its private garages at Le Mans, via Newhaven and Dieppe. They were driven by England, experimental engine development head Jack Emerson, and ex-Bristol employee Phil Weaver. Chief engineer Bill Heynes travelled out in style with his MkVII, mechanics John Lea and Joe Sutton came by Bedford van whilst the boss and



LE MANS, 1951

Moss and Johnson were in the no.22 C-Type, XKC 002. Though leading early on and with Moss setting the fastest lap of the race, the car retired with fewer than 100 laps complete.

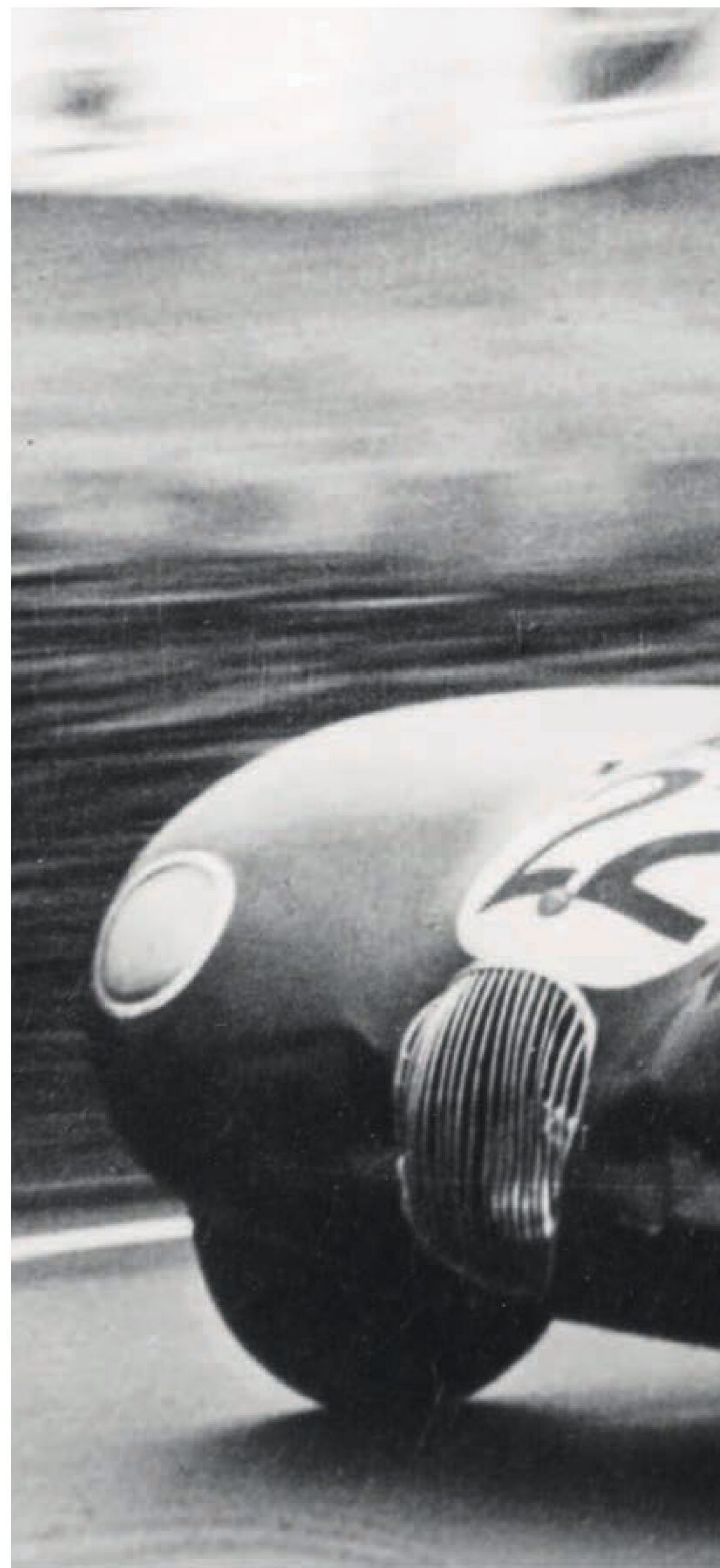


Joe Wright flew out in the Dunlop plane. The C-Type entries lined up like this: • No.20: Peter Walker/ Peter Whitehead, XKC 003, engine E1003-8, 204bhp@5,750rpm • No.22: Stirling Moss/Jack Fairman, XKC 002, engine E1002-8, 205bhp@5,750rpm • No.23: Leslie Johnson/Clemente Biondetti, XKC 001, engine E1004-8, 202bhp@5,500rpm The number 8 at the end of the engine numbers indicates an 8.5:1 compression ratio in deference to the poor quality of circa 80 octane fuel. All the cars used the production 1.75in SU carburettors rather than the later 2in units. These early C-Types were distinguishable from their 1952 production versions by the two large 'V' shaped bonnet louvres and four individual slanted vents on each front wing. There was a fourth Jaguar entered, the standard XK120 OTS (660449) AEN 546 of Bob Lawrie/Ivan Waller. The drivers were a formidable mixture of age and experience plus youth with Walker and Moss the quickest. Indeed at this time ERA and soon to be BRM V16 racer Walker (7 October 1912-1 March 1984) was every bit as fast as the already very experienced Stirling who was racing for HWM, having started his first world championship race at the Swiss GP a month before Le Mans. Fairman (15 March 1913-7

February 2002) was the all rounder, Whitehead (12 November 1914-21 September 1958) a versatile driver of ERA and Ferrari single seaters amongst others, whilst Johnson (22 March 1912-8 June 1959), now the owner of the ERA name, was very fast but already suffering from the onset of health problems caused by childhood nephritis and acromegaly that had damaged his heart and which would eventually lead to his premature death. The final driver was the famous road racer and four times Mille Miglia winner (1938 and 1947/48/49), the Sardinian born Clemente Biondetti (18 August 1898-24 February 1955, died of cancer), who had become disenchanted with Enzo Ferrari and had raced an XK120 in the 1950 Mille Miglia and his XK-engined Ferrari 166 based special in the 1950 Italian GP.

THE SCENE IS SET

This was the third post-war Le Mans 24-Hours, the first in 1949 being won by the Chinetti/ Selsdon Ferrari and in 1950 Rosier *père et fils* triumphed for Talbot. In 1951 the biggest opposition for Jaguar amongst the 60 starters was from the 4.5-litre two-seat version with cycle wing mudguards of Talbot's venerable pre-war GP design. There were six in total, the two



most feared being Louis Rosier's 1950 winning car shared with soon to be World Champion Juan Manuel Fangio, and the Henri Louveau machine driven by fellow Argentinians Froilan Gonzalez and Onofre Marimón. This car was later sold to Pierre Levegh and rebodied in barchetta style, and Levegh drove it solo for 23 hours at the 1952 Le Mans before it broke handing victory to Mercedes-Benz. Also in evidence were no less than nine Ferraris that included four of the new 4.1-litre 340 America models whilst five Aston Martins, three Cunninghams and two Allards completed the 'big' car competition although the 2.6 Aston DB2s were not a match in outright



Stirling Moss in action during the early part of the race. Though the car failed to finish, Moss set the quickest lap of the race.

pace. Practice times had a brave Walker achieving a 4m 50 second lap in the dark (3.5 seconds quicker than Rosier's 1950 lap record, although Autosport quoted 4m 46 seconds), even though the French Marchal lights demanded by the Automobile Club de l'Ouest were hopelessly inadequate (Lucas lights were not 'approved'). These contributed to Moss hitting the back of Mort Morris-Goodall's Aston Martin which had stopped during night practice to avoid Sauerwin's overturned Porsche; fortunately the damage was relatively superficial. After a word or three from the not to be denied 'Lofty', Marchal supplied some newer and more effective

lamps. Further drama was caused by Biondetti's car ingesting a broken plug electrode which required John Lea to rebuild the engine helped by a visiting young Bob Berry who spoke fluent French courtesy of his French mother. Berry, who would later race one of the 'lightweight' LT XK120s as well as Jack Broadhead's D-Type, was employed by Jaguar for many years and became their public relations manager. Walker's lap was easily the fastest recorded (subsequent practice sessions were run in wet weather) but one of the Chrysler powered Cunningham C2Rs was officially credited with the quickest time of 5m 03 seconds.

RUN, AND GO!

Until 1963 the echelon of cars for the run and jump in Le Mans start was placed in order of their engine capacity, so the 1951 line up was headed by the two Allards followed by the three Cunninghams. Chaboud's Talbot Lago was first away but by the end of lap one Gonzalez in Louveau's Talbot led from Moss in the no.22 C-Type, Tom Cole's Cadillac powered Allard J2, then Chaboud, Johnson's C-Type and Meyrat in another Talbot. On lap three Cole had survived a minor collision with the scenery, but tragically Jean Lariviere in Johnny Claes' Ferrari 212 Export was killed in an accident at Tertre

LE MANS, 1951

Rouge on lap five. Meanwhile Stirling had passed Gonzalez and after one hour was nearly 20 seconds ahead and pulling away with Biondetti and Whitehead third and fourth.

On lap 31 Moss set the fastest lap of the race in 4m 46.8 seconds by which time he was over a lap ahead of Gonzalez, and after four hours the C-Types were first, second and third, but trouble was looming and it first struck Biondetti who had remained aboard for the second stint. He noted that the oil pressure was falling and stopped around 8.30pm where the sump was found to be adequately full but there was no pressure in the main gallery. In those days the regulations demanded that any mechanical problems had to be resolved using the tools carried in the car, which was not possible, so the first C-Type was *hors de combat* after 50 laps. Two hours later and with heavy rain falling – a regular and almost guaranteed

visitor at la Sarthe – Moss/Fairman were leading from the two Peters with the outpaced Fangio/Rosiern and Gonzalez/Marimon Talbots in third and fourth. Ferrari's performance was disappointing, the 340 Americas being relatively slow, perhaps due to clutch problems. The quickest of these driven by famous Monegasque GP racer Louis Chiron ran out of fuel on the circuit (possibly due to sloppy pit work). Chiron cadged some essence and drove it back to the pits where he handed over the car to co-driver Heldé (Pierre Louis-Dreyfus) but the plombreur's seals were of course broken and the car was disqualified for infringing the strict refuelling regulations.

Alas the Jaguar bandwagon lost another wheel when Moss suddenly suffered a catastrophic loss of oil pressure and a con-rod through the crankcase near Arnage on lap 92 (or 94 depending upon the source).

The cause of this and Biondetti's similar but less dramatic failure turned out to be the use of copper delivery pipes in the sump which had fractured due to vibration stresses. Thereafter steel pipes were used. It was not only Jaguar which was suffering as Rosier retired his Talbot around the same time with a split oil tank. It had come as a shock to the seasoned aficionados that a 3.4-litre sports car was faster than an adapted 4.5-litre GP car even with Fangio or Gonzalez at the wheel. The C-Type's trump card was its 145-150mph top speed, made possible by Malcom Sayer's beautiful streamlined body, a phenomenal velocity in an open car with just an aeroscreen and a tad over 200bhp.

Now it was just one C-Type left in the pouring rain and messrs. Whitehead and Walker drove with due care and consideration in deference to the copper delivery



XKC 003, battered but not bowed, heads on towards what would be a famous victory.

Watching in the pits, Greta Lyons and Leslie Johnson cross their fingers as the end is in sight. William Lyons and Bill Heynes just look worried!



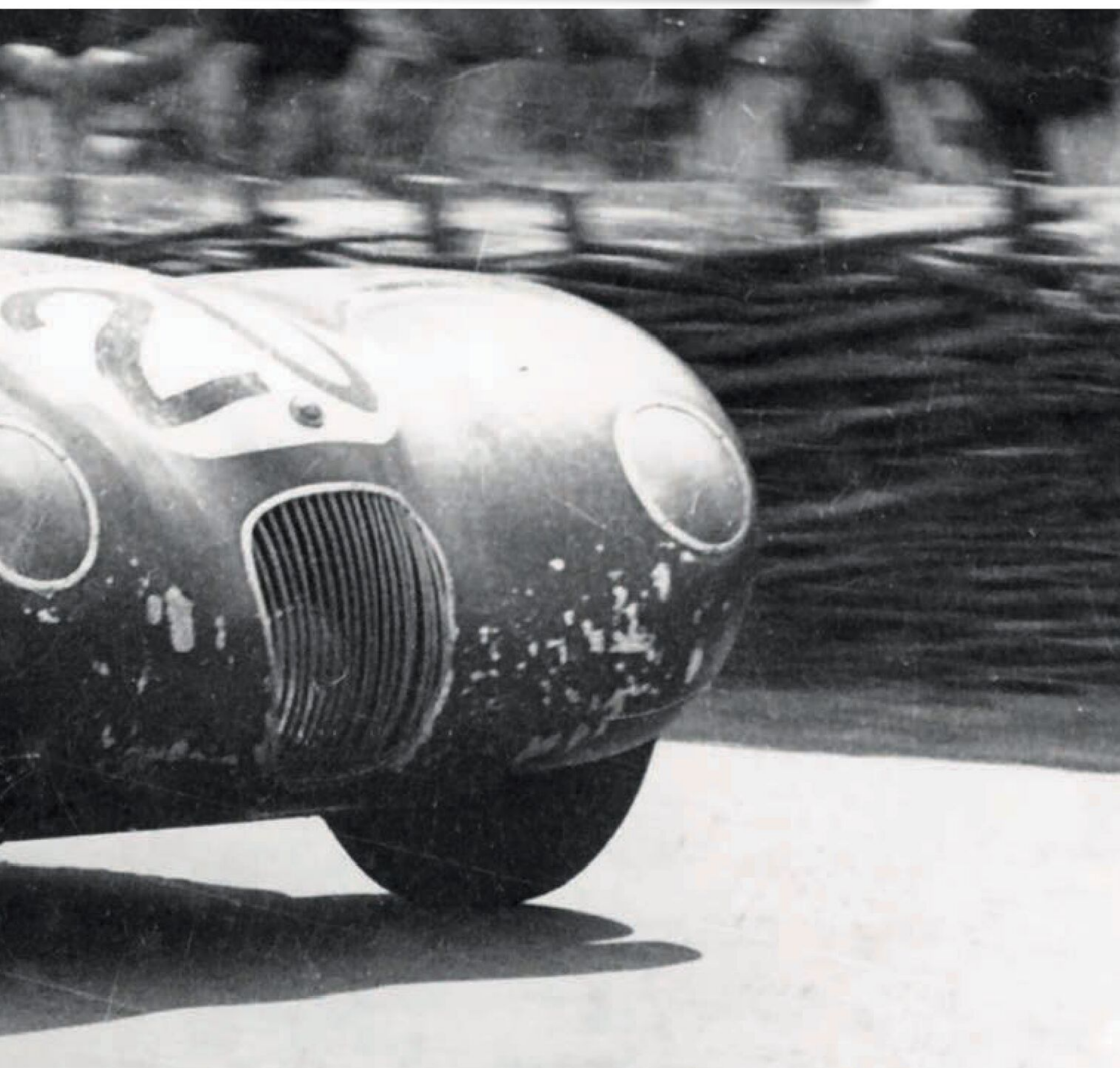
THE OTHER JAGUAR...



At Le Mans in 1951 there was, of course, one more Jaguar in the race, the Bob Lawrie/Ivan Waller standard XK120 which finished a worthy 11th after some clutch and brake issues. These two were an interesting pair. Lawrie (1903–1982) was an accomplished climber/Alpinist and began designing, manufacturing and supplying mountaineering boots. These were used on the 1933 Everest expedition and subsequently many other climbs including the successful 1953 Everest campaign. A supplier of alpine and polar equipment he had the Lawrie Glacier on the west coast of Graham Land in Antarctica named after him.

His chum Ivan Waller (1906–1996) was a dedicated professional climber and Alpinist who had raced cars but always preferred motorbikes even into his 70s. He had survived a bailout from a crippled plane during the Second World War after his canopy became wrapped around the tailplane. A true dare devil, he survived numerous falls and incidents without serious injury and was still climbing aged 80, his entire life seemed to be one incident and adventure after another.

Victory! Whitehead (left) and Walker sit on the back of their winning car for a relaxed chat...



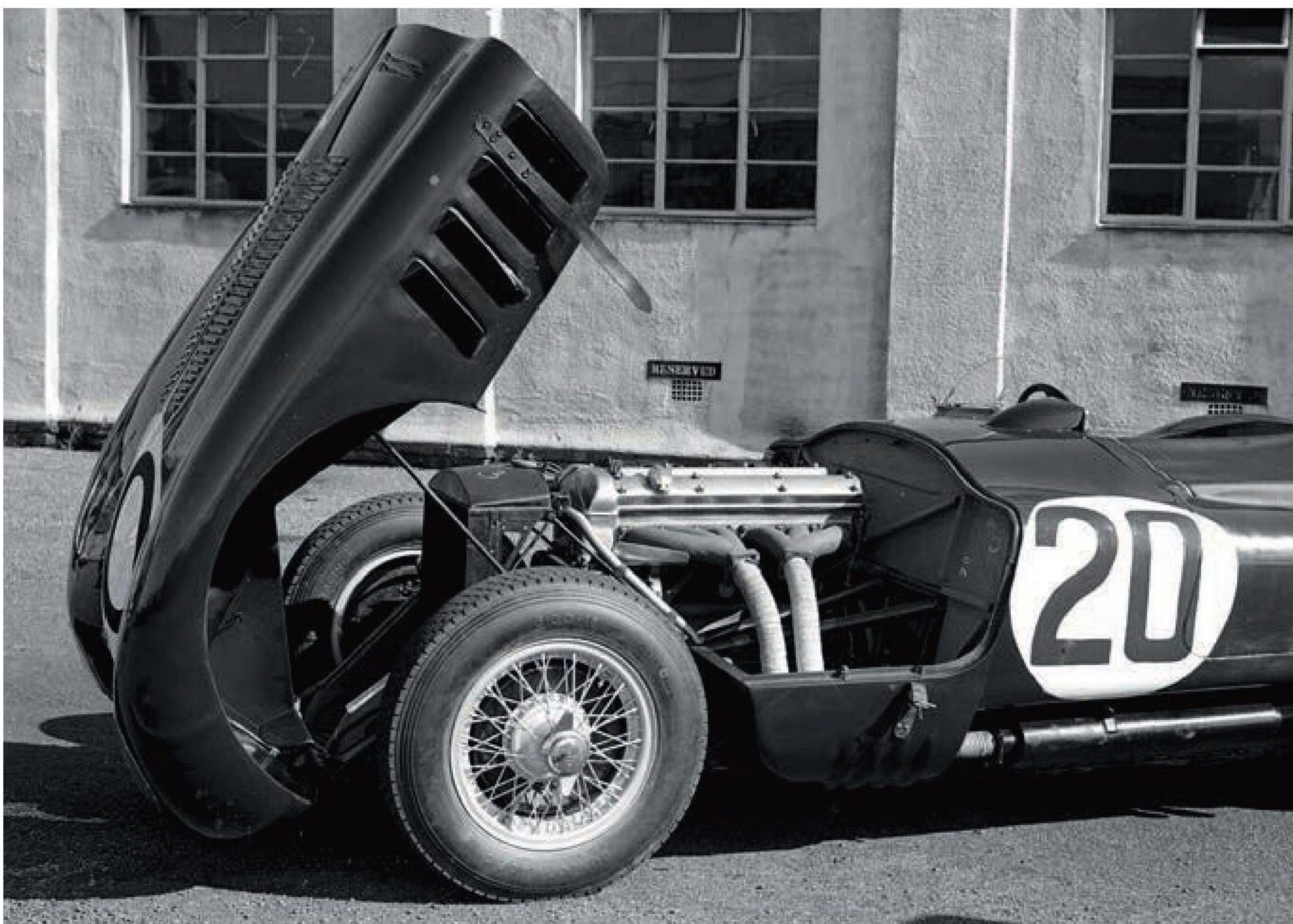
pipe problems. This appeared to be exacerbated by a slight vibration period around 5,200rpm so with a relatively big lead it was possible to keep under this figure without losing the edge. Their situation was considerably eased when the second-placed Gonzalez blew a gasket in Louveau's Talbot just after the 12-hour mark with the Jaguar seven laps ahead. This left the Walters/Fitch Cunningham in second place (the other two had crashed earlier on) followed by the Macklin/Thompson Aston Martin DB2, the Rolt/Hamilton Nash-powered Healey coupe, the Abecassis/Shawe-Taylor Aston and the rest. The best of the 340 America Ferraris had been the Eddie Hall car driven by Hall himself (famous for his pre-war Tourist Trophy performances in a modified Derby Bentley) and Giuseppe Navone. It was running fourth until a slipping clutch slowed it and ultimately caused retirement after the battery failed following so many pitstops to try and fix the problem.

LE MANS, 1951

During late Sunday morning the surviving Cunningham began to slip down the order due to valve trouble, perhaps a victim of the poor quality fuel. Many cars retired over the years here with burned out valves and pistons, indeed the 1956 Le Mans winning Ecosse D-Type only just survived the race with no.5 piston almost completely burnt out together with the combustion chamber.

After 20 hours (midday Sunday) Whitehead and Walker were ten laps ahead of the Meyrat/ Mairesse Talbot and this lead had grown by another lap shortly after 1pm. The Cunningham was going slower and slower, quickly slipping down the field and with one hour to go the C-Type had broken the race distance record and was cruising ten laps ahead of the Talbot and the rest. Finally, 4pm arrived and Peter Whitehead and Peter Walker won the 19th Le Mans 24-Hour race from the Meyrat/Mairesse Talbot with works Aston Martins finishing third, fifth and seventh. The Levegh/Marchand Talbot was fourth, the delayed Rolt/Hamilton Nash-powered Healey sixth, and the best Ferrari was of Chinetti/Lucas which came home eighth.

So Jaguar won Le Mans with a record average speed and distance



The winning Jaguar C-Type of Peter Walker and Peter Whitehead.

which would have been considerably faster and longer but for the aforementioned rev restriction and the night time rain. However they were very fortunate given that this was the C-Type's debut event, in a gruelling 24-hour race no less and it was entirely unproven. Astonishingly Jaguar contrived to repeat the experience in 1954 with the D-Type, but that is another story. Additionally it was done with minimal pit personnel, Peter Whitehead helping

out when not driving. It was the first British win at Le Mans since the Hindmarsh/Fontes victory for Lagonda in 1935 and a much needed boost for British morale and exports.

Following the race the winning car was driven back to England by Peter Walker accompanied by his wife and delivered to the Henlys' showroom in Piccadilly before appearing in the transport pavillion at the South Bank Festival of Britain.

If only this could still be done today.



The team (Lofty England and Bill Heynes second and third from left) and the C-Types line up at the Folsehill works before the off. All three cars were driven to Le Mans having crossed on the Newhaven/Dieppe ferry.

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Racing legend

We take an in-depth look at the D-Type, the car that marked a major turning point in the history of racing Jaguars, bringing aviation-inspired technology to the racetrack.

Words: Paul Guinness

If the launch and ultimate success of the C-Type proved the capability of Jaguar's engineers (and hinted at the company's motor sport ambitions), the D-Type moved things on once again thanks to its genuinely ground-breaking design. As with the D-Type's predecessor, much of the credit for that belonged to Malcolm Sayer, the former aeronautical engineer who had spent the Second World War working for the Bristol Aeroplane Company, moving to Iraq

in 1948 before returning to the UK at the start of the '50s.

By 1951 Sayer was employed by Jaguar, his most famous creation being the headline-grabbing E-Type that arrived a decade later. But it was his earlier work with competition Jaguars that first showed his raw talent when it came to automotive engineering, with the D-Type in particular being a real game-changer thanks to its use of aeronautical-inspired techniques.

Sayer worked as part of a talented team headed up by William Heynes, who had joined Jaguar (then still known as SS Cars Ltd) way back in 1935. In the early post-war years, however, and with the Jaguar name now in use, Heynes persuaded company founder and chairman William Lyons that an in-house engine was required to replace the units previously bought in from the Standard Motor Company. The two men also agreed that Jaguar's push upmarket would benefit from



being involved in international motor sport, which would guarantee publicity and help to make Jaguar a household name.

Both strategies worked, of course, with the 1948-on XK120 proving itself via on-track action. Meanwhile, its competition replacement – the C-Type of 1951-53 – was created specifically for international racing and went on to be a major success, twice winning the Le Mans 24 Hours. But if the C-Type was a clever and innovative design (employing a lightweight tubular chassis that combined inherent strength with real weight-saving benefits), its replacement of 1954 would prove to be another leap forward for Jaguar.

HI-TECH DESIGN

It all began with the D-Type's cockpit, a monocoque tub created using

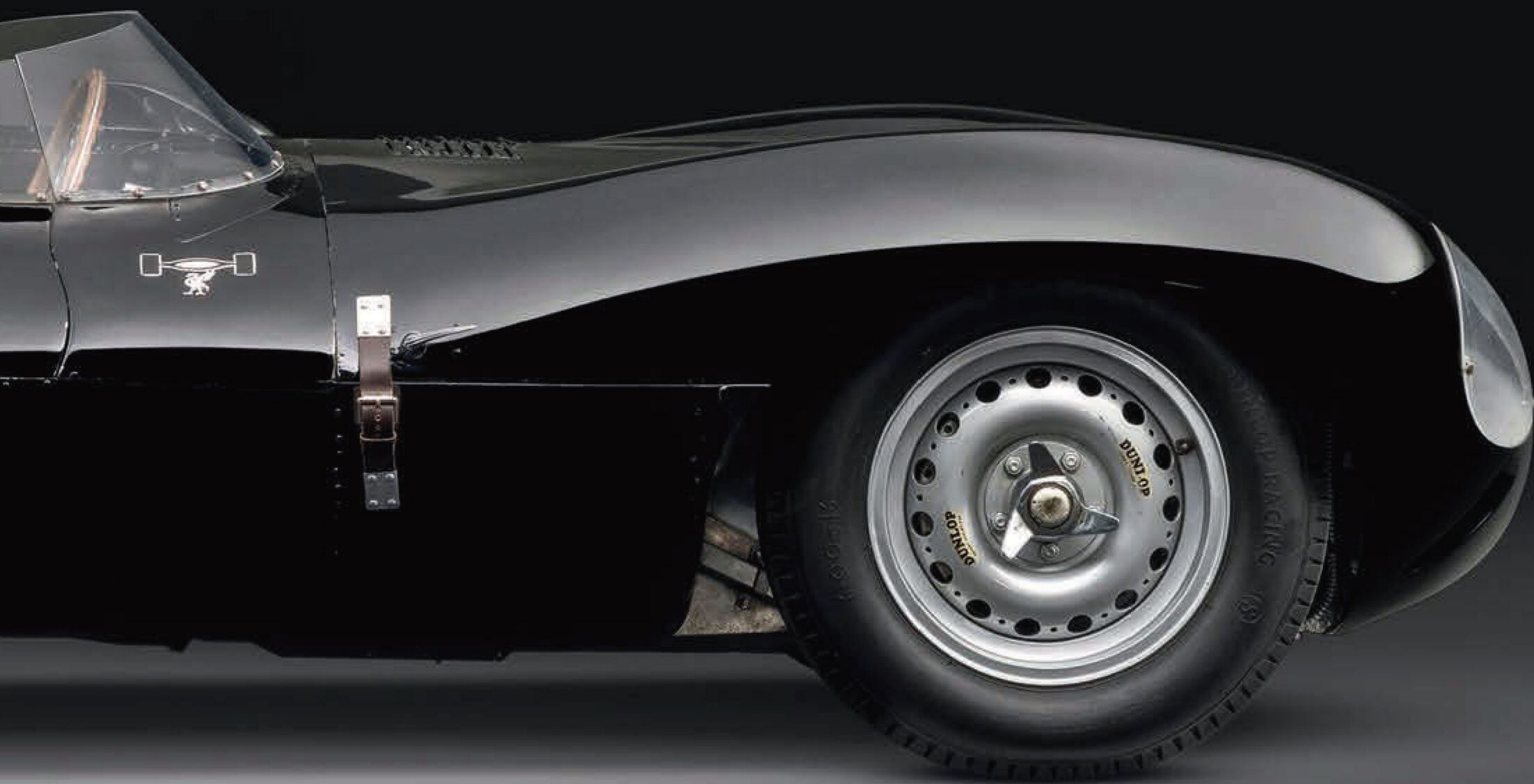
mostly sheets of magnesium alloy. But the shape of the cockpit was just as important as its construction method, with its elliptical design and compact size resulting in maximum rigidity and impressive aerodynamics.

Ahead of this central monocoque tub was a tubular subframe that housed the D-Type's engine, steering and front suspension. The rear suspension was attached directly to the rear bulkhead by four trailing arms, with a transverse torsion bar providing springing and an A-bracket offering lateral support. The D-Type's large one-piece bonnet hinged forward (like the C-Type's), while the rear bodywork was completely removable.

The D-Type was one of the first racing cars of its type to use such an advanced monocoque-type structure, employing stressed-skin engineering that incorporated the framework

with riveted aluminum body panels, thereby forming a single rigid structure. As with the C-Type, both the front and rear panels of the car remained unstressed and were easily removable for repairs, although the D-Type's overall design was inevitably more advanced than its predecessor's.

Thanks to Malcolm Sayer's background in the aircraft industry, aerodynamics played a crucial role in the design of the D-Type, the aim being to make it an even more 'slippery' shape than its predecessor. Sayer knew that aerodynamics were as important to any racing car's top speed as outright power, and thus set about creating the most streamlined competition car of its generation. Even the underside of the D-Type had to be as smooth as possible to ensure free-flow of air and to reduce drag.



JAGUAR D-TYPE



For maximum aerodynamic efficiency, it was decided that the D-Type should be lower and shorter than its predecessor, to not only enable the car to achieve a higher top speed than the C-Type but also to improve its cornering capability. Most of the form for the car came from mathematical computation, thanks to Sayer's previous aircraft design experience. He devised a process that included slide rule and seven-figure log tables for working out the formulae for complex curves; it was the kind of work now undertaken by specialist Computer Aided Design (CAD) software, yet Sayer worked it out mathematically and to great effect. Indeed, initial tests of an unpainted prototype D-Type revealed a top speed of 178 mph (almost 30mph faster than the C-Type), which meant that Sayer's calculations were spot on.

In his 1988 book, *Jaguar* (published by Sidgwick & Jackson), Philip Porter wrote: "The D-Type was more sophisticated in construction than the C-Type and aerodynamically more efficient, and for many people it has become simply the classic sports racing car of all time. It has

often been likened to an aircraft on four wheels. Applying techniques learned during aircraft work in the war, [William] Heynes and his team, by now unrivalled in the British motor industry, designed a car of largely monocoque construction."

In a further tribute to Malcolm Sayer, Porter explained: "There is a well-known saying in motoring circles that 'if it looks right, it probably is right'. There can be no better example of that principle than the legendary D-Type. The body was the work of Sayer, who later adopted the famous fin for high-speed stability at Le Mans."

MECHANICAL UPDATE

Perhaps inevitably, the mechanical differences between the D-Type and its predecessor weren't as great as the design and construction changes, with the newcomer retaining the brilliantly successful XK powerplant, albeit linked to a brand new gearbox. Changes had been made to the engine, however, including the adoption of a revised block, larger valves and triple Weber carburetors, all of which contributed to an enhanced output of 250bhp for the initial 3.4-litre version.





A change in Le Mans regulations saw full-width screens fitted from 1956, hence this ingenious Malcolm Sayer design.

JAGUAR D-TYPE

The engine itself was shorter than before thanks to dry-sump lubrication, which brought two benefits; it allowed for more effective oil supply under race conditions, and also enabled the engine to be mounted lower in the frame. That second point was obviously an aid to aerodynamics, although the decision was also made to mount the engine at an angle of 8 degrees, which once again helped to create a lower bonnet line. Fuel, meanwhile, was stored in aircraft-style flexible bag tanks positioned in the tail, with the filler accessed through the D-Type's streamlined headrest – which would itself gain a

distinctive rear fin later on, designed to improve high-speed stability.

The D-Type's suspension comprised double wishbones up front, with a rigid axle bringing up the rear – a set-up similar to that used on production Jaguars of the period. Dunlop-designed disc brakes featured on all four wheels (another first for Jaguar), with both firms working together during the early '50s to adapt aircraft-style disc braking for road-car use. Indeed, 1953 had seen the first use of disc brakes on the C-Type works cars (said to be a contributory factor in that year's victory at Le Mans), and the D-Type took this to another level. The wheels

were also the work of Dunlop, their light-alloy design featuring holes to aid with brake cooling.

RACING DEBUT

Ongoing development had taken place throughout 1953, but it was in the spring of '54 that the very first D-Type was ready for testing at Le Mans, where the latest racing Jaguar would be making its 24-hour debut later that year. Remarkably, that inaugural D-Type was driven (still unpainted) all the way to Le Mans ready to be put through its paces.

The roads making up the circuit had been closed for a rally, and so the time allotted to D-Type testing

“The D-Type was more sophisticated in construction than the C-Type and aerodynamically more efficient”





was unrealistically short. With Jaguar determined to see just how well its latest racer performed, however, it ignored a plethora of angry officials and remained on the circuit long enough to beat the 1953 lap record (achieved by Ferrari) by a full five seconds. Needless to say, the Italian marque fought back, hence its use of 4.9-litre V12 power by 1954.

Despite such a promising start, the '54 Le Mans 24 Hours proved to be both frustrating and disappointing

for Jaguar, with the company entering three D-Types made up of the following teams: Tony Rold with Duncan Hamilton, Stirling Moss with Peter Walker, and Peter Whitehead with Ken Wharton. All three cars suffered from misfiring problems, however, forcing them to make unscheduled pit stops to have their fuel systems cleaned. Dust in the fuel was clogging the paper filters fitted by Jaguar, and it was only when these were discarded during the race that

the cars began to run as they should.

Nevertheless, two of the D-Types dropped out early with brake and transmission problems, while the final car (driven by Hamilton and Rolt) performed well but was still struggling to make up for the earlier unplanned stops. The gap between the sole remaining D-Type and the leading V12-engined Ferrari began to close towards the end of the race, with the D-Type's aerodynamic superiority enabling it to hit an astonishing 172.8mph on the Mulsanne Straight, compared with 'just' 160.1mph achieved by the 4.9-litre Ferrari. In the end the Jaguar finished almost a lap behind its Italian rival, lagging by 97 seconds. It was a disappointing start for a Jaguar whose very existence was based around the need to win at Le Mans.

TRAGEDY, VICTORY

Numerous changes were introduced for the 1955 season, with the D-Type now featuring 'long-nose' bodywork (claimed to improve aerodynamics still further), while the engine was fitted with bigger inlet and exhaust valves (enlarged



JAGUAR D-TYPE

once again later in the D-Type's short life). In order to provide enough space above the relatively compact combustion chambers of the long-stroke engine, the exhaust valves had to be inclined 40 degrees from the cylinder axis. There was also a change to the D-Type's front subframe, with the previous magnesium alloy being usurped by steel for ease of repair – although the steel employed was particularly stiff, of the type used for motorcycle frames.

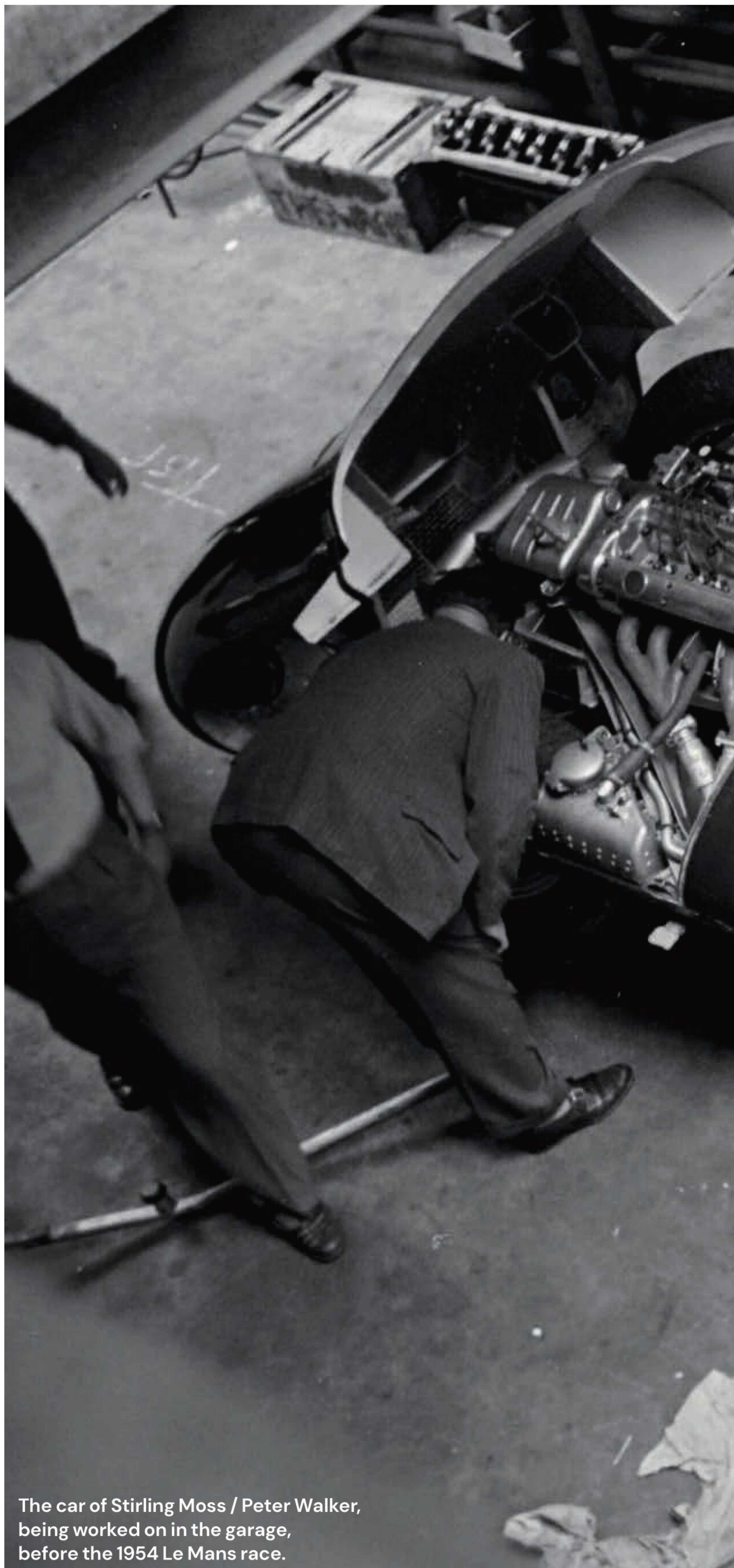
At the 1955 Le Mans, the latest D-Types proved competitive up against the mighty new Mercedes-Benz 300 SLRs, although the latter were widely tipped to win. But fate intervened when that year's Le Mans 24 Hours saw the worst accident in the history of motor sport, which occurred at a stage in the race when Mike Hawthorn's D-Type had a narrow lead over Juan Manuel Fangio's Mercedes. The events of that fateful day are explained by Heiner Stertkamp in *Jaguar: The Complete Story*, published by Motorbooks in 2006: "During the battle against Fangio and his Mercedes-Benz 300 SLR, which was equipped with a spectacular air brake that operated by the trunk lid opening backward, Hawthorn decelerated for a pit stop after overtaking a slower Austin-Healey. The Austin-Healey consequently veered to the left, and Pierre Levegh, who was approaching very quickly in another Mercedes-Benz, could not avoid the Healey. His car launched into the crowd and exploded, causing more than 80 deaths."

Mercedes immediately withdrew its cars from the race, but Jaguar opted to continue, despite Mike Hawthorn taking some persuasion to do so. In the end, the D-Type driven by Hawthorn and Ivor Bueb went on to win.

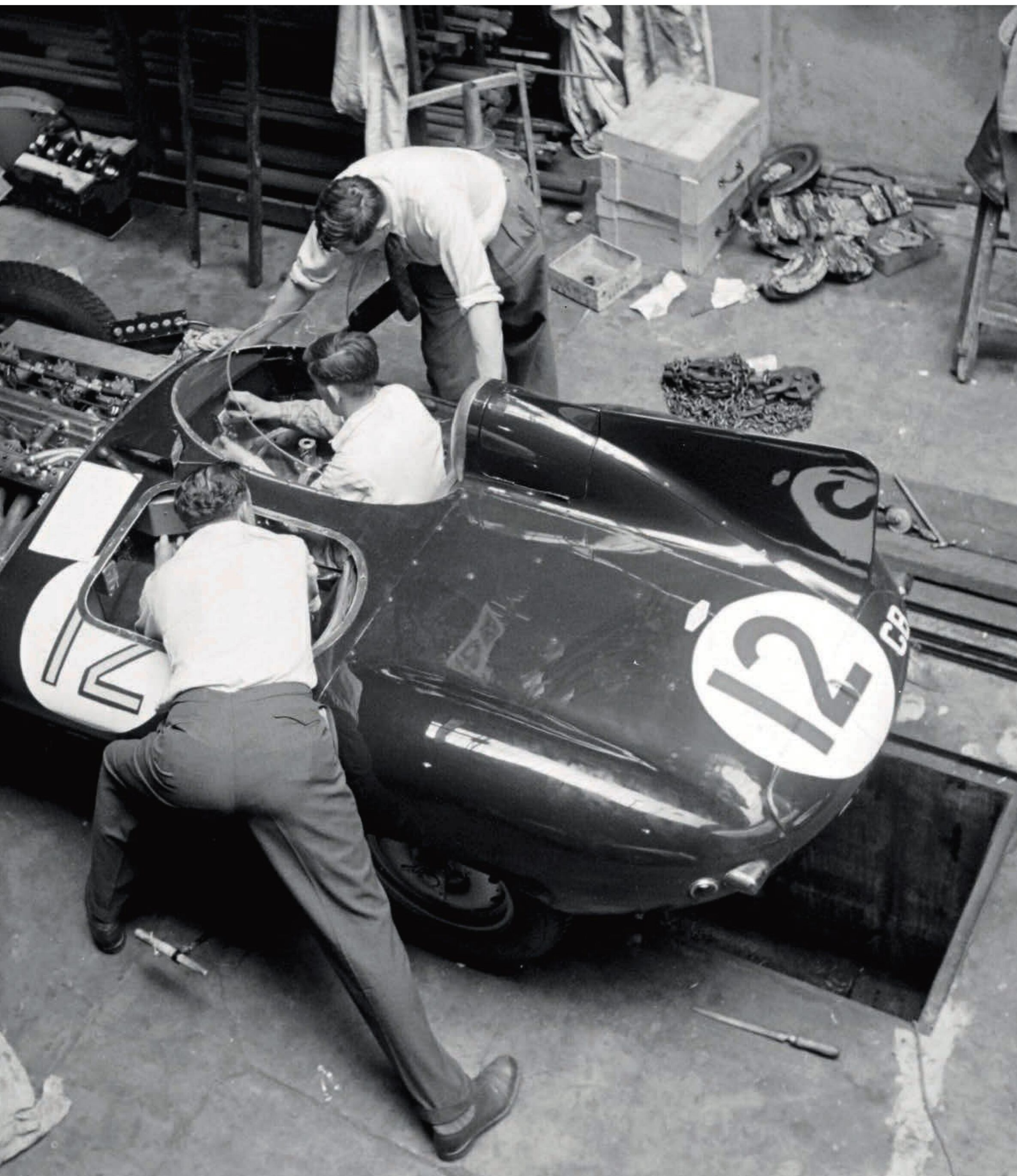
Despite the D-Type being created essentially as a Le Mans conqueror, it also achieved success elsewhere, both on British circuits like Goodwood and overseas – particularly in the USA, where the Cunningham team raced several D-Types. In 1955, for example, a '54 works car on loan to Cunningham won the Sebring 12 Hours in the hands of Mike Hawthorn and Phil Walters, while May 1956 saw the team's entries for Maryland's Cumberland National Championship Sports Car Race finishing fourth, fifth, seventh and eighth.

PRIVATE SUCCESS

Despite rival Mercedes-Benz deciding to withdraw from motor sport at the end of the 1955 season, Jaguar entered the Le Mans 24 Hours once again in '56, although the final result brought disappointment for the works team – with just one of the three factory-entered cars finishing the race (in sixth place). And yet 1956 also proved to



The car of Stirling Moss / Peter Walker, being worked on in the garage, before the 1954 Le Mans race.



JAGUAR D-TYPE

The Ecurie Ecosse team took first and second place at Le Mans in 1957.



be a huge success for the D-Type at Le Mans thanks to the antics of a privateer team.

All cars had to comply with an array of new legislation that year, following on from the tragedy of 1955, including the use of full-width windshields – which had the effect of raising the frontal area of the D-Type by around 13 per cent. Malcolm Sayer came up with an ingenious solution, however, by designing the plastic windshield to continue over the passenger seat, creating a transparent ‘roof’ that minimised drag on that side. Potentially more problematic was the rule that suddenly set a 2.5-litre maximum engine size for all new entrants, although the fact that the D-Type was already effectively a ‘production’ car meant it was allowed to race. Jaguar therefore boasted the largest engine on the grid, making the D-Type comfortably the fastest in practice.

Things didn’t go well, however, with one of the factory cars crashing on only the second lap, which caused other cars to enter the melee and forced another works D-Type out of the race. Shortly afterwards, the Hawthorn/Bueb car began to misfire and lost time in the pits, a factor that

“Despite the D-Type being created essentially as a Le Mans conqueror, it also achieved success elsewhere”

contributed to its eventual sixth place.

There to preserve the D-Type’s honour, however, was Scotland’s Ecurie Ecosse team, which privately entered its own D-Type. And despite that car not being quite as up to date technically as the factory cars, it was fast enough to pull away from a battle with the Aston Martins. After 24 tense and exhausting hours, Ron Flockhart and Ninian Sanderson won the race and provided the D-Type with another Le Mans victory – albeit a ‘non-factory’ one.

Although Jaguar officially withdrew from motor sport at the end of the 1956 season, the following year proved to be the D-Type’s most successful, taking five of the top six places at Le Mans. Ecurie Ecosse was given considerable support by the factory (including use of the latest 3.8-litre engine, now with 270bhp on tap), and again took the win as well as second place. This was the best result in the D-Type’s racing history.

By 1958, however, racing rules were changing once again, with regulations for that year’s Le Mans 24 Hours now dictating a maximum 3.0-litre capacity for the engines of all sports racing cars – with no exceptions this time round. The domination of the 3.8-litre D-Type was suddenly at an end; and although Jaguar did develop 3.0-litre versions of the D-Type that went on to compete in the 1958, ‘59 and 1960 Le Mans events, it proved to be an unreliable unit and – by the start of the ‘60s – was overtaken by rivals when it came to power output.

The reign of the D-Type was coming to an end, although it remained one of the cars to beat in club racing and national events for many years to come. And on today’s classic racing scene, it is inevitably one of the most desirable, most competitive and most valuable icons of its age. There will never be another Jaguar quite like the legendary D-Type.

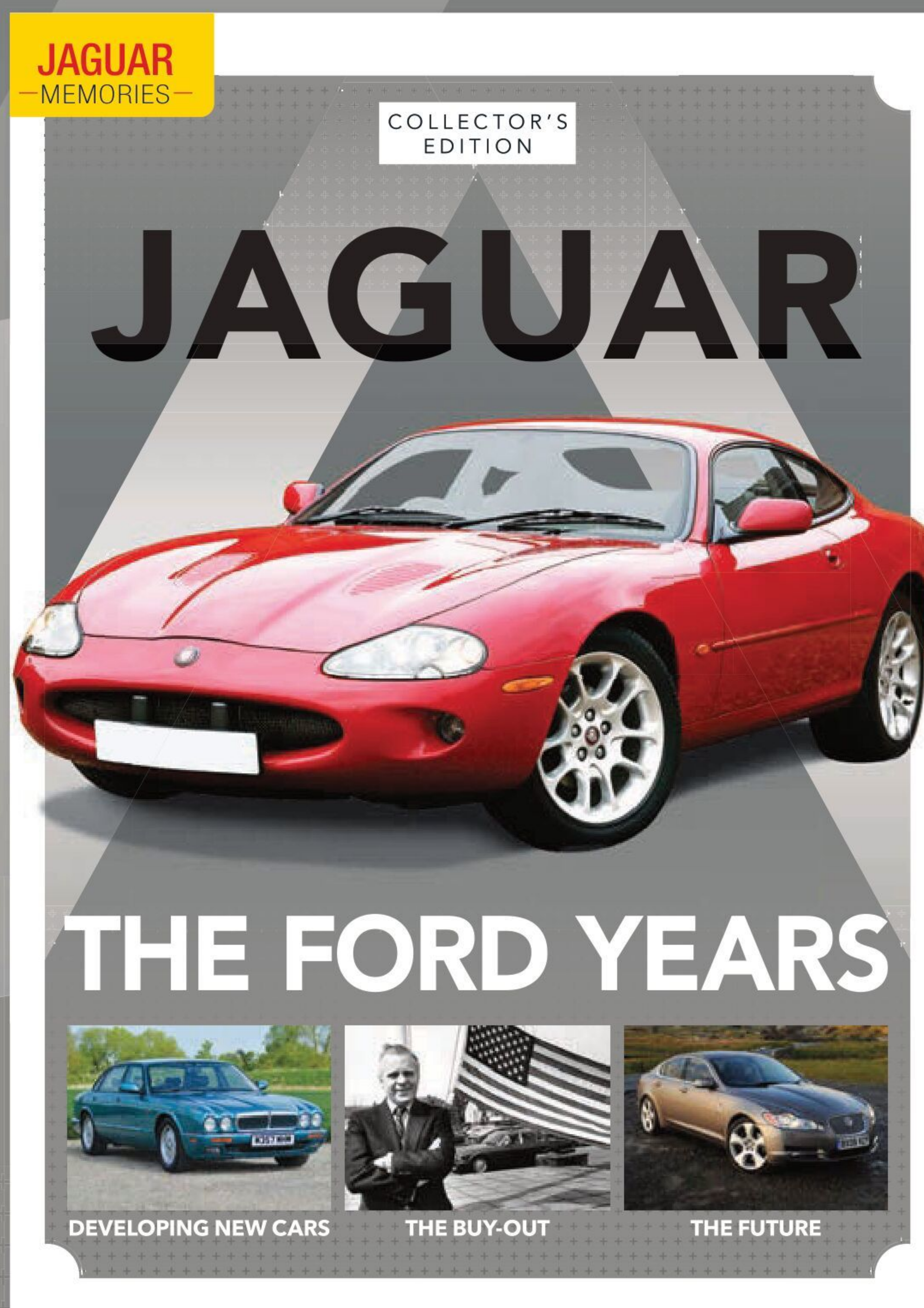
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E-Types on the track

E-Type racing continues to make the headlines with the E-Type Challenge, some 60 years after the model won its very first race. Here, we look back at its early competition years. Words: Paul Parker

For many years preceding the advent of the Jaguar E-Type, assorted production sports and GT cars (de facto sports cars with a roof) raced in America and Europe in events big and small.

Inevitably Ferrari's 3.0-litre V12 250GT was the dominant force in Europe and by 1960 the Ferrari of choice was the Pininfarina-bodied short wheelbase Berlinetta which was further developed for 1961. At this time its only realistic competitor was the Aston Martin DB4GT, but despite an alloy body and all alloy engine the

Aston, even in lighter Zagato-bodied form, was still too heavy courtesy of its substantial steel chassis.

So the appearance of the E-Type in 1961 was predictably seen as an opportunity for Jaguar to return to racing. Certainly this very beautiful machine was radically different to the venerable XK, featuring at long last independent rear suspension and a semi-monocoque construction clothed in a sleek body reminiscent of the D-Type, albeit less voluptuous.

Unchanged was Jaguar's XK engine and the Moss gearbox, but this was

a gigantic improvement over the XK genus. As is well known the first two E-Types to be raced (at Oulton Park on 22 April 1961) were Tommy Sopwith's Equipe Endeavour chassis 850005 (ECD 400) and the John Coombs 850006 (BUY 1), both OTS cars. Driven by Graham Hill and Roy Salvadori they finished first and third in the 25-lap race split by Innes Ireland's Aston Martin DB4GT, 'Salvo' who had initially led having experienced brake problems.

It was an impressive debut and the next outing for the E-Type,



The E-Type's debut – and a victorious one at that – came on 22 April 1961 at Oulton Park. Here, Salvadori in the 'Coombs' car leads eventual winner Graham Hill in the Equipe Endeavour entry.

Picture: Jaguar Cars

the Spa 500km in Belgium on 13 May, was perhaps one of its most worthy results ever. The super fast Mike Parkes drove Sopwith's car to second place only 90 seconds adrift of Wily Mairesse's 1961 works Ferrari 250GT SWB despite spinning at La Source – a fantastic effort given the E-Type's less than impressive aerodynamics against the Ferrari. ECD 400 had raced at Oulton with 243.5bhp but at Spa it boasted 276bhp courtesy of Iskenderian camshafts and altered valve timing. A leaking fuel tank during practice

was fixed by a wodge of chewing gum for the race!

Following this Salvadori won the Norbury Cup at Crystal Palace in BUY 1 from Sears in ECD 400, the latter suffering an engine oil leak onto the exhaust pipes. At every UK meeting more E-Types were promised but in fact only the existing Sopwith and Coombs cars were as yet built, aside from 'Lofty' England's own car (nearly every roadster was exported at this time). At Brands Hatch for the Peco Trophy on 3 June only Hill and Salvadori faced Parkes' Ferrari 250GT.

This resolved itself in Ferrari's favour with Salvadori's Coombs car leading for eight laps until a duff plug caused the E-Type to lose a cylinder, finally finishing second whilst Hill had a moment challenging for the lead and dropped to third.

Five weeks on and the E-Types of Hill (Sopwith) and Salvadori (Coombs) were joined by Bruce McLaren in Peter Berry's just delivered 850010 (3 BXV) for the British Empire Trophy meeting at Silverstone. Alas Hill retired with overheating and Salvadori dropped from second to fifth with

E-TYPES RACING 1961-65

unspecified problems leaving McLaren to take a lucky second place. The result was a foregone conclusion anyway as Stirling Moss was driving the Rob Walker/ Dick Wilkins Ferrari 250GT and he won.

IMPROVEMENTS NECESSARY

With more E-Types due to be raced Phil Weaver of Jaguar's competition department dictated a memo that had a very long and specific list of detail changes and modifications that encompassed engine and mountings, radiator, coil, exhaust, clutch, gearbox, brakes, rear suspension, bodywork including bonnet, seats, instruments, wheels offset, even upholstery and trim.

At Aintree for the British GP, the GT support race seemed like a certain E-Type benefit but it was not to be. Parkes dominated practice but complained of marginal brakes and more overheating in ECD 400 whilst Sears in BUY 1 had similar problems and a car that would only pull

5,000rpm in top. Ditto Dennis Taylor, subbing for McLaren who was driving in the GP. At the start the gearlever came off in Mike Parkes' hand leaving Sears to lead the race in BUY 1 but he slowed due to the aforementioned problems and was overtaken by Australian Lex Davison in Ogier's Aston Martin DB4GT Zagato on the final lap. Dennis Taylor finished fourth behind the second Ogier Aston driven by John Whitmore.

Following this Mike McDowel of Jaguar and later Coombs concluded that any race over 30 miles was liable to cause these problems to return. Ultimately the overheating problems caused by water loss were solved by a redesigned header tank and larger diameter plumbing. Subsequently McDowel crashed BUY 1 during testing at Goodwood to evaluate a possible TT entry causing front and rear body damage. Damage notwithstanding the E-Type was found to be too soft, laterally unstable at the rear and suffering

from excessive tyre wear on the circuit's relentless right-handers, all symptoms of its road car origins. Unsurprisingly no E-Types were entered for the three-hour TT.

Prior to this Mike Parkes won the Scott Brown Trophy at Snetterton in ECD 400 from Salvadori in the Coombs car whilst Sir Gawaine Baillie finished fourth in his new car (850008). However Albert Powell posted a DNS in the Berry E-Type after driveshaft failure.

Meanwhile Jack Lambert had made his E-Type debut at Silverstone in his pearl grey roadster, RL 26, and won his race, the start of a very successful club career for this wellknown car. Another roadster registered 2 BBC was campaigned by Robin Sturgess, Jaguar distributor for Leicestershire, and he became a regular sparring partner of Jack Lambert in the lesser races (this was the car re-registered 848 CRY that was featured in the film *The Italian Job*). Between them they achieved a raft of second and third place finishes



1962 now, and Hill is seen in action again, this time in the Coombs car – re-registered '4 WPD' – at Silverstone holding off the E-Type's nemesis, the 250 GTO. Hill would finish third behind a brace of the Ferraris.

Le Mans 1962 saw three E-Types entered – all fixed-heads. Pictured is the Briggs Cunningham/Salvadori car that placed fourth, narrowly ahead of the Sargent/Lumsden car. The Charles/Coundley car failed to finish.



during July to September against varied opposition at Silverstone, Mallory Park and Snetterton.

In August Peter Sargent took delivery of 850009 (898 BYR), a roadster that would metamorphose into a successful Le Mans car which he part owned with Lotus Elite ace Peter Lumsden. The car was immediately stripped down and prepared for a GT support race at the German GP where Sargent finished seventh, complaining of understeer and ineffective brakes. Later on both drivers achieved second and third placings at Silverstone, Goodwood and Snetterton with Lumsden winning at the Boxing Day Brands Hatch meeting. Also in evidence was former XK150 racer Anthony Davenport's new FHC E-Type (fitted with the engine from his XK) at Oulton Park and Ken Baker's soon to be famous roadster 7 CXW.

A return to Brands Hatch on August Bank Holiday Monday resulted in

Moss winning as he pleased in the Walker Ferrari as Parkes crashed the other Ferrari due to a burst tyre. Hill retired the Endeavour E-Type after a puncture and Salvadori spun off at Druids in the Coombs entry losing second place to McLaren's Peter Berry car. Baillie was sixth and there was another new car for George Wicken who finished far behind after stopping to refasten his hood clip. At the end of the month Wicken won a minor race here on the club circuit.

Come September and Roy Salvadori finished second in BUY 1 behind the Parkes Ferrari for the Molyslip Trophy at Snetterton with Ireland's Aston DB4GT third and Lumsden, Baillie, Wicken and Sturgess in fifth, sixth, seventh and tenth at the flag. In the accompanying Autosport three-hours Peter Sargent achieved third place. There were of course many other events during 1961 including some American races but space precludes a full listing thereof.

A SECOND YEAR AT THE RACES

In 1962 the aforementioned club racers continued with Robin Sturgess replacing his roadster with a new FHC version whilst Dick Protheroe arrived with the first of his CUT 7 registered FHCs. The Equipe Endeavour car was sold on to James Delingpole who raced it in minor events with the Earl of Denbigh in 1962. Come 1964 it was painted red and advertised for sale at £1,050 by Cheshire Sports Cars. Many years later it was allegedly discovered languishing in somebody's front garden from whence it was rescued.

The year began with Walt Hansgen winning his GT class in the Daytona three-hours although David Hobbs retired the Peter Berry car, whilst Robin Sturgess led home Ken Baker and Ed Mitchell at Snetterton in March. Sturgess repeated this again at Snetterton one week later ahead of Baker, Protheroe and Davenport. In between Briggs Cunningham shared

E-TYPES RACING 1961-65

one of his E-Types with John Fitch to finish 14th at the Sebring 12-hours which heralded the debut of Ferrari's formidable 250GTO.

The John Coombs car was now sporting a 'wide angle' 35/40 engine and other changes including a thinner gauge monocoque and alloy bonnet, which enabled Graham Hill to finish second at Oulton Park in April behind Mike Parkes in a Ferrari 250GT SWB with numerous other E-Types in attendance, the best being David Hobbs in the Berry car and Protheroe's CUT 7 in fifth and sixth. At the Easter Goodwood meeting Salvadori shunted the Coombs E-Type, now registered 4 WPD, and David Hobbs finished third in class with 3 BXV.

Elsewhere the club racing scene was increasingly populated by E-Types, for Brian Waddilove and hillclimb specialist Phil Scragg. Ken Baker and Dick Protheroe won at Mallory Park, Brands Hatch and Silverstone. The Le Mans test weekend produced the much modified but still interim Sargent/Lumsden E-Type now dry-sumped and wearing an alloy bonnet and crude hardtop which retained the roadster windscreen. Sargent lightly shunted the car but it proved reasonably competitive and recorded 155mph on Mulsanne.

The still evolving Coombs E-Type was back in action at the May Silverstone meeting but Graham Hill could only manage third place behind the dominant Parkes and Masten Gregory 250GTos, although he had led Gregory for a while. For the Nürburgring 1,000km Sargent/Lumsden were the fastest over 3.0-litre GT entry but were then placed in the prototype category from which they retired. More E-Types appeared including one for broadcaster and musician Anthony Hopkins. In early June Graham Hill was still pursuing his desire for a stiffer, lower, better handling 4 WPD and BRM cast magnesium wheels were tried at Silverstone. The car

appeared at Mallory Park on 11 June with peg-drive light alloy wheels and Hill duly finished second, 3.8 seconds behind the Parkes GTO and just ahead of John Surtees in the Maranello Concessionaires GTO. Hobbs and Protheroe were fourth and fifth but Peter Berry had lost interest and 3 BXV was seen no more after this.

Le Mans was next and Briggs Cunningham ran his FHC 860630 (1337 VC) for himself and Roy Salvadori, Maurice Charles shared his new FHC 860458 (503 BBO) with Lister racer John Coundley and the two Peters had 850009 (898 BYR) in its ultimate form complete with MkIX discs. It was engineered by Brian and John Playford who had moved its internal bulkheads for more legroom and was fitted with air outlets for brake and cockpit cooling. The Maurice Charles car expired very early on but by late Sunday morning Sargent/Lumsden were up to fifth two laps ahead of the Cunningham car and fast catching the fourth placed Ferrari GTO. Sadly with two hours to go the gearbox started to protest (Lumsden had noticed a squeak during practice) and the car (which reached 168mph on Mulsanne) had to be limited to 3,000rpm in top which resulted in them being caught and passed by the Cunningham entry just 30 minutes from the end. Otherwise they could have been third but instead finished fifth behind the Cunningham car. It transpired that a gasket with an oil feed hole for the pressure fed D-Type gearbox had been fitted the wrong way round at Jaguar by an apprentice unfamiliar with this type of gearbox.

Back in Britain messrs Morrison, Waddilove, Baker, Sturgess, Protheroe, Scragg, Griffiths, Davenport, Lambert, Delingpole, Firmin, A. Parkes et al clocked up numerous victories and top three places at club level during June, July and August.

Following yet more work on 4 WPD, Hill was racing at the August Bank Holiday Monday Peco Trophy against six GTos. After setting fourth fastest

Le Mans 1963 and the car of Paul Richards / Roy Salvadori, Briggs Cunningham, leads Jack Sears / Mike Salmon, Maranello Concessionaires, Ferrari 330LMB.



time in practice Graham found 4 WPD misfiring and tricky in the wet, ultimately finishing fifth. For the TT at Goodwood Graham Hill chose to drive the Coombs GTO leaving 4 WPD to Roy Salvadori who finished fourth behind the GTO Ferraris led by Innes Ireland. Dick Protheroe was sixth but Lumsden crashed out. Protheroe meanwhile was advertising his E-Type for sale and in due course another FHC was built up from parts that he would race during the first half of 1963.



Post Goodwood the private E-Types continued winning in the many club and national races, hillclimbs and sprints to finish off a satisfactory year. Unbeknown to the world in general there had been a plan to build a team of pukka racing GT E-Types at the end of 1961 but only one car was constructed, this being the Malcom Sayer 'low-drag' car (EC1001) that would remain largely unused before eventually being sold to Dick Protheroe in mid-1963.

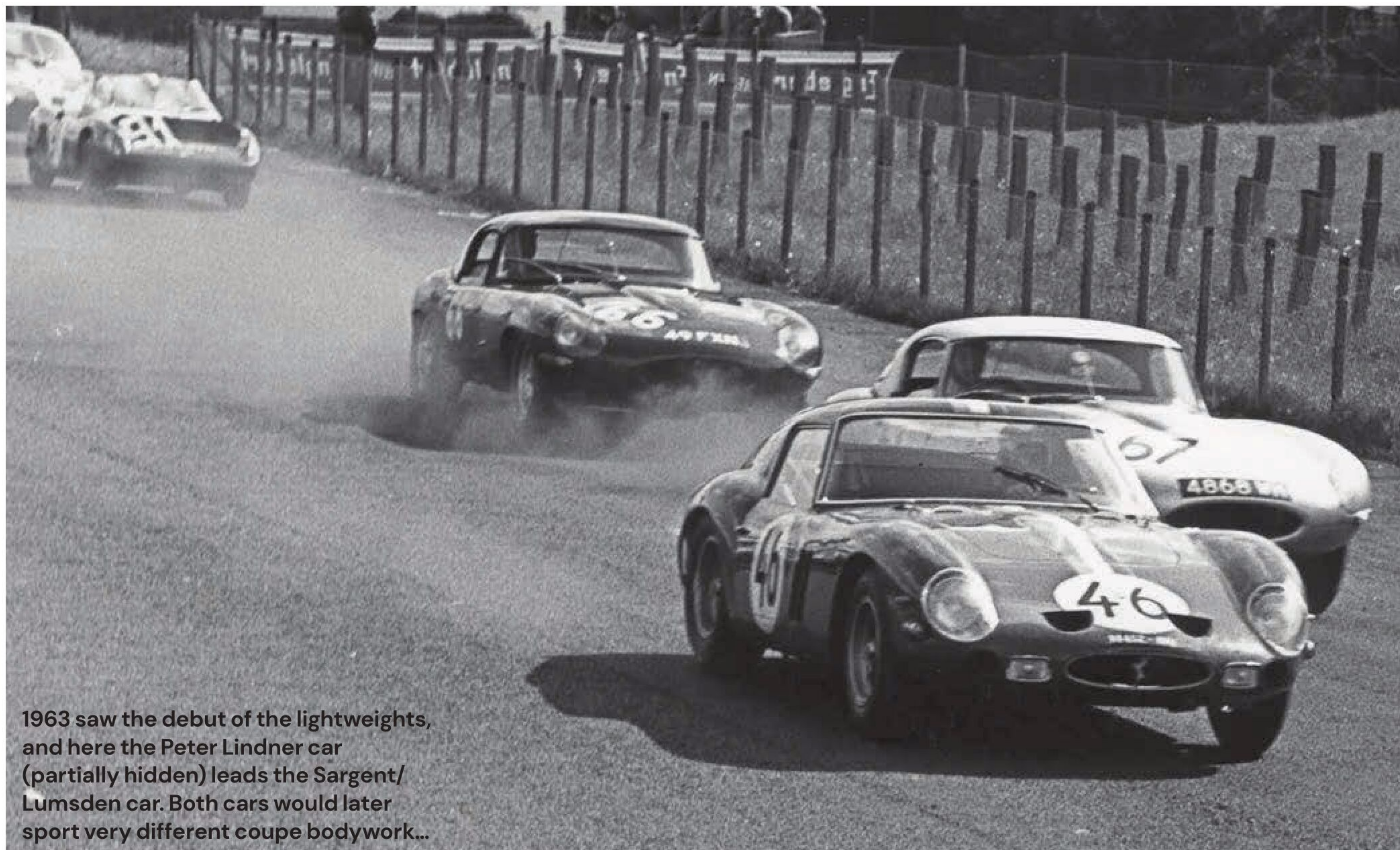
1963: LIGHTWEIGHT YEAR

Another plan to build six alloy-bodied roadsters in January 1962 was abandoned but in 1963 the all alloy fuel injection 'lightweight' E-Type appeared at Sebring where the Kjell Qvale's Leslie/Morell car (no.3 S850660) finished seventh and the Cunningham entry eighth (no.2 850669) after delays. These 'new' cars were significantly lighter and stiffer than their modified road car predecessors if fundamentally still of the same DNA (this had come

about after Jaguar borrowed a 250 GTO following the TT for comparison purposes with 4 WPD during which the Ferrari was taken apart and then reassembled).

So at a wet Snetterton two weeks on Graham Hill in the John Coombs lightweight (no.1 S850006, still using the original 1961 chassis number) scored yet another debut win for an E-Type which he followed up by winning at Easter Goodwood ahead of Parkes in the Coombs GTO and Salvadori driving Tommy Atkins' new

E-TYPES RACING 1961-65



1963 saw the debut of the lightweights, and here the Peter Lindner car (partially hidden) leads the Sargent/Lumsden car. Both cars would later sport very different coupe bodywork...

lightweight (no.4 S850661) registered 86 PJ. Hill achieved a hat trick at Silverstone in May but only after Parkes and Salvadori crashed, the Atkins lightweight surviving to finish second. Dick Protheroe was lapped in his second CUT 7 evocation but still ended up third.

In the meantime Peters Sargent and Lumsden purchased chassis S850663, (no.6 in the sequence), and Lumsden was running fourth in the Nürburgring 1,000km before crashing during a rain shower, the car requiring a new monocoque as a result. This race also featured the Peter Lindner lightweight S850662 (no.5), in which Jaguar distributor Lindner led the race briefly, setting a GT lap record before losing oil pressure. Better luck attended the car at the Berlin GP on the banked Avus circuit where Peter Nöcker won the GT race.

On the international calendar the next big race was Le Mans and Briggs Cunningham entered three lightweights, but it was a disaster. The fastest of the trio driven by Walt

Hansgen/ Augie Pabst only lasted an hour due to its prototype all-synchro Jaguar gearbox seizing up (all three cars were allegedly thus equipped and the use of the specified ZF five-speed box was limited at this time), the Salvadori/Richards car became involved in a huge Mulsanne shunt caused by Bruce McLaren's Aston Martin 214 blowing up, in which Bruno Heinz died, and Roy was thrown out of the car onto the track verge but survived with severe bruising.

The third car driven by Bob Grossman (with Briggs Cunningham) suffered brake failure at max speed on Mulsanne and Grossman rammed the escape road straw bales stoving in the nose. Astonishingly he managed to drive the car back to the pits where it was fitted with Hansgen's radiator and part of his bonnet (a complete bonnet change was not allowed). They finished ninth but would have been seventh or higher and ahead of the Cobras but for this. As an aside the British Peters had got themselves involved in racing

the spaceframe Lister Jaguar with a new coupé body which was not a successful venture.

At Reims the sports/GT support race featured the unique factory low-drag E-Type (EC1001, which had a steel centre section) that Dick Protheroe had persuaded Sir William Lyons to sell to him (it became his third 'CUT 7'). It was to be a triumph with Protheroe (who had sold his FHC to Roger Mac) finishing second overall and winning the GT against strong GTO opposition, being timed at 174mph.

Back in Britain during July Graham Hill achieved his fourth win in a row with 4 WPD at Mallory Park ahead of Jack Sears (GTO) and the lightweights of Salvadori and Peter Sutcliffe, the latter in S860666 (no.9). This however was to be Hill's last race in 4 WPD. At Silverstone the British GP Sports and GT race featured Mike Salmon driving 4 WPD with Sutcliffe in his lightweight and Protheroe in the low-drag E-Type. Despite a misfire Protheroe was



This is the Grossman/Cunningham lightweight that finished ninth at Le Mans in 1963, having survived a shunt caused by brake failure. It was the only one of three Cunningham-entered lightweights to finish

third in class and first Jaguar home behind the Sears and Piper GTOs.

The traditional August Bank Holiday Brands Hatch meet saw Graham Hill try both the Coombs GTO and 4 WPD in practice achieving an identical lap time but a scrutineer told John Coombs that the Jaguar's homologation sheet stated wire wheels and they would not let it race with its cast mag alloy wheels. Later on the scrutines changed their minds but Coombs had already withdrawn the Jaguar (for which he was subsequently fined, don't you just love bureaucracy?) and decided to put Graham in the GTO. It was a bad day at the races for Jaguar with Sutcliffe crashing at Paddock, Sargent developing ignition problems and Protheroe's low-drag suffering from fuel starvation.

It was Aston Martin's turn to suffer the pen pushers at the TT when the Aston 214s were forced to run narrower rear rims, more homologation nonsense. This was a Ferrari walkover with Hill driving

the Maranello Concessionaires car to victory just ahead of Mike Parkes in the Coombs GTO with Salvadori third in 86 PJ, Sears fourth in 4 WPD, Protheroe sixth and Lumsden ninth. A disappointed Salvadori lamented the fact that 86 PJ was just off the pace.

The final major British race was the Autosport three-hours and once again Protheroe was the highest placed Jaguar finishing third in class behind those pesky GTOs again and fifth overall. In the national and club races 1963 was another stellar year for E-Types with wins for Ken Baker, Jack Lambert, Roger Mac, Sutcliffe, Protheroe, Jackie Stewart, Sargent and others.

In Australia successful Jaguar and all round racer Bob Jane bought the tenth car, S850677, in December 1963, which he would race in 1964. In all there were 12 identifiable lightweights built as racers in roadster form, of which one (no.11 S850668) was sold to Dick Wilkins and would remain virtually unraced bar a hillclimb appearance,

for decades. It resurfaced during the 1990s and became a winner for owner Nigel Corner and Barrie Williams at the Goodwood Revival TT.

Across the Atlantic the Cunningham cars of Hansgen (S850559) and Richards (S850664) finished third and fourth in the Bridgthampton 500 behind the Cobras of Dan Gurney and Ken Miles.

1964 SUCCESS

For 1964 hillclimb ace Phil Scragg acquired no. 12 S850669, the last of the run, with which he was to enjoy many successes. John Coombs retained 4 WPD but Graham Hill was now driving the Maranello Concessionaires Ferrari 250 GTO. Also in evidence was the new Willment Cobra driven by Jack Sears whilst the very rapid works Project 214 Aston Martins had been sold to Mike Salmon and Brian Hetreed. At the Easter Goodwood meeting, Hill, Sears, Piper in his GTO and Salmon's 214 Aston outpaced the Jaguars led by Protheroe's low-drag but

E-TYPES RACING 1961-65

the Coombs car was not entered. This was a shame as Hill lapped in 1.26:8 during testing on 8 April. A month later at a wet Silverstone Hill won again from Salmon, Sears and Piper with Roy Salvadori having his final race in the Atkins car 86 PJ (which was sold to Roger Mac) finishing fifth ahead of Protheroe, Sutcliffe and Dan Gurney in the still developing 4 WPD. This was a very disappointing result and 'Lofty' had wanted to put Jackie Stewart in the car but Coombs tried Brabham who was too slow and then Gurney who reportedly did not like the car.

Prior to this at the Le Mans test weekend two more low-drag E-Types appeared, both rebodied lightweights, the Lumsden/Sargent 49 FXN and Peter Lindner's car; the former a private project engineered by Samir Klat and Harry Watson which had begun in late '63, the latter a Jaguar-built machine. Both lapped satisfactorily at the same pace.

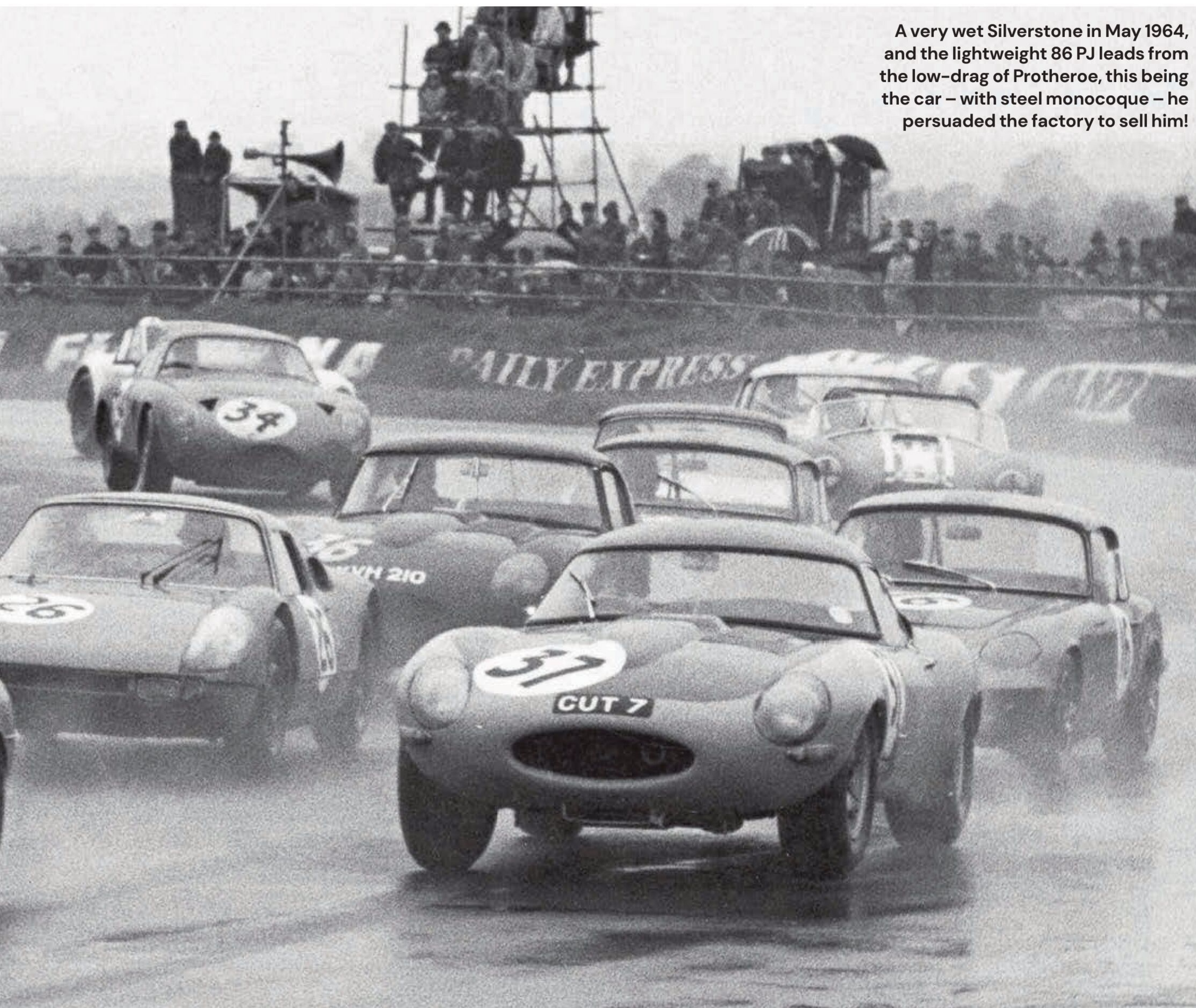
During May Protheroe and Sutcliffe entered the Spa 500km where the former was an impressive fourth quickest in practice despite never having raced there. After battling over second place with Piper's GTO the low-drag was hobbled by losing all but fourth gear in its five-speed ZF gearbox (these units absorbed 55 bhp against 25 bhp for the four-speed Jaguar box) and finished 12th. Sutcliffe's standard lightweight survived a scary off course excursion during practice and finished tenth. He had better luck at Montlhéry on 24 May and won his race whilst Roger Mac (who had sold his ex-Protheroe second CUT 7 to David Cunningham) was enjoying 86 PJ at Oulton Park winning easily from minor opposition.

All three low-drag E-Types appeared at the Nürburgring 1000km on 31 May where the cars should have gone well. However Protheroe crashed, suffering concussion so he non-started whilst Lindner's car ran competitively but the ZF gearbox lost all but third gear and then seized. The



British Peters were handicapped by a faulty clutch and a special gearbox supplied by Jaguar that slowed the car and they too retired. The good news was that Paddy McNally – Autosport staffer who decades later controlled trackside advertising and hospitality in F1 and close associate of Bernie Ecclestone – finished second in class with Warwick Banks in his lightly modified FHC E-Type. In June Jackie Stewart tested the Coombs car at Silverstone and went faster than anybody had then managed even though the track was not fully dry.

Le Mans beckoned and the four Peters, British and German, entered their respective low-drag lightweights. 49 FXN had been radically altered both aerodynamically and mechanically and was very different to the factory built German-raced car which now claimed 344bhp. Sadly the British car retired with yet another gearbox failure having been fifth in class but the Lindner/Nöcker machine blew its head gaskets possibly due to internal pressures in its highly boosted motor. After the first one failed the car was driven flat out to try and regain



A very wet Silverstone in May 1964, and the lightweight 86 PJ leads from the low-drag of Protheroe, this being the car – with steel monocoque – he persuaded the factory to sell him!

ground but then it happened again and finally it was withdrawn. Following the race a factory report concluded that the car was too heavy and needed more power.

Following Le Mans the Reims 12 Hours reappeared on the calendar and Dick Protheroe with John Coundley finished eighth and won the over 3.0-litre GT class whilst Sutcliffe/Bradley finished 14th and second in class. The next weekend Jackie Stewart finished second in the GT support race with 4 WPD at the British GP, beaten by an enraged Jack Sears who had been unnecessarily

black-flagged. Bob Jane came all the way from Australia to finish tenth in his lightweight S850677.

Following this Peters Nöcker (in the Lindner low-drag) and Sutcliffe raced their respective cars at Zolder where the former retired and Sutcliffe finished second to the winning Ferrari 250LM but ahead of all the GTOs. Once again the August Bank Holiday Monday Guards Trophy proved to be a big disappointment for the Jaguars. Jackie Stewart retiring with a puncture, Protheroe finishing 12th with Mac and Sutcliffe 17th and 18th after delays. It was the final Coombs

outing for 4 WPD which was later sold to Charles Bridges of Red Rose Racing where Brian Redman achieved many victories with it.

The TT at Goodwood was also uninspiring with Peter Lumsden the sole E-Type finisher in eighth place whilst Sutcliffe's car retired with a broken CW&P, Mac's with a fuel problem caused by a blocked filter and the German 'low-drag' car driven by Nöcker was a non-starter. During practice he had been unable to lap competitively and Peter Sutcliffe was asked to drive the car allegedly by Jaguar who suggested that it was

E-TYPES RACING 1961-65

because Nöcker did not know the circuit. He improved on the German's time by over a second but was still comparatively slow (1:32.8) and then crashed at Woodcote. Afterwards Sutcliffe opined that the handling was too oversteery and worse than his own car whilst the brakes needed pumping.

An extremely wet and then fog bound Autosport three-hours in September saw Roger Mac finish second in 86 PJ behind Jack Sears in the Willment Cobra coupe, Mac having led earlier on. Sutcliffe finished fifth and Protheroe tenth. This was effectively the end of the British season for major races but the Montlhéry 1,000km and tragedy awaited in October. Here Protheroe was again joined by John Coundley having lapped faster than the Lindner/Nöcker car during practice and in the race these two were running ninth and eighth respectively. Then Lindner lost control of the German low-drag on lap 84 and the car hit Patria's Abarth in the pits, killing both drivers and three officials. The remains of the car, its long incarceration, the interim replica and its very recent rebirth using most of the original structure are now well known.

Protheroe/Coundley won their GT class and finished a worthy seventh overall but this car, like 4 WPD was for sale. By international standards the lightweight/low-drag E-Types



Le Mans 1964 and the Peter Lindner lightweight (co-driven by Peter Nöcker) now sporting its factory produced low-drag body, leads the lightweight of Peters Sargent/Lumsden – this car now having its own completely different low-drag solution. Sadly, neither car finished.

were no longer fast enough against the rising tide of mid- and rear-engined machines, even the more powerful and lighter Daytona Cobras would only last another year at this level. Peter Sutcliffe/Dickie Stoop did finish third in the Kyalami nine-hours during November and had several second and third places plus a victory elsewhere in South Africa in early 1965, but this car too was heading for Red Rose Racing where it joined 4 WPD.

Protheroe's CUT 7 low-drag was eventually sold to David Wansborough who ignominiously crashed it into Oulton Park's lake in

May 1965 during the TT. A further successful life awaited it in hillclimb circles in 1967 driven by Mike Wright, as it was for Bob Jennings' ex-Sutcliffe car. 49 FXN remained with its original owners and was campaigned by Peter Lumsden in 1965 (Peter Sargent having retired), but only on British soil. It was now more powerful (348bhp) and significantly faster and won some minor races before inevitably being sold on. Happily like all its siblings it survived the long years of club racing, neglect and misfortune and is still racing today.

At club level Jack Lambert and David Cunningham added to the pot collection but these cars were also for sale in due course but the E-Type was always present with successes in all disciplines. In 1965 Jackie Oliver and Chris Craft drove Ken Baker's famous bronze E-Type 7 CXW to third place in the Brands Hatch 1000.

By the late 1960s the E-Type had become the mainstay of Modsports racing and during the last 15 years or more has been a constant winner in historic events and FIA GT racing against its former adversaries. Not bad for what was originally a production road car rather than a dedicated racing machine.



Away from the 'big' races, the E-Type was very successful at club level, Jack Lambert's car pictured here during an AMOC meet at Silverstone in March 1964.

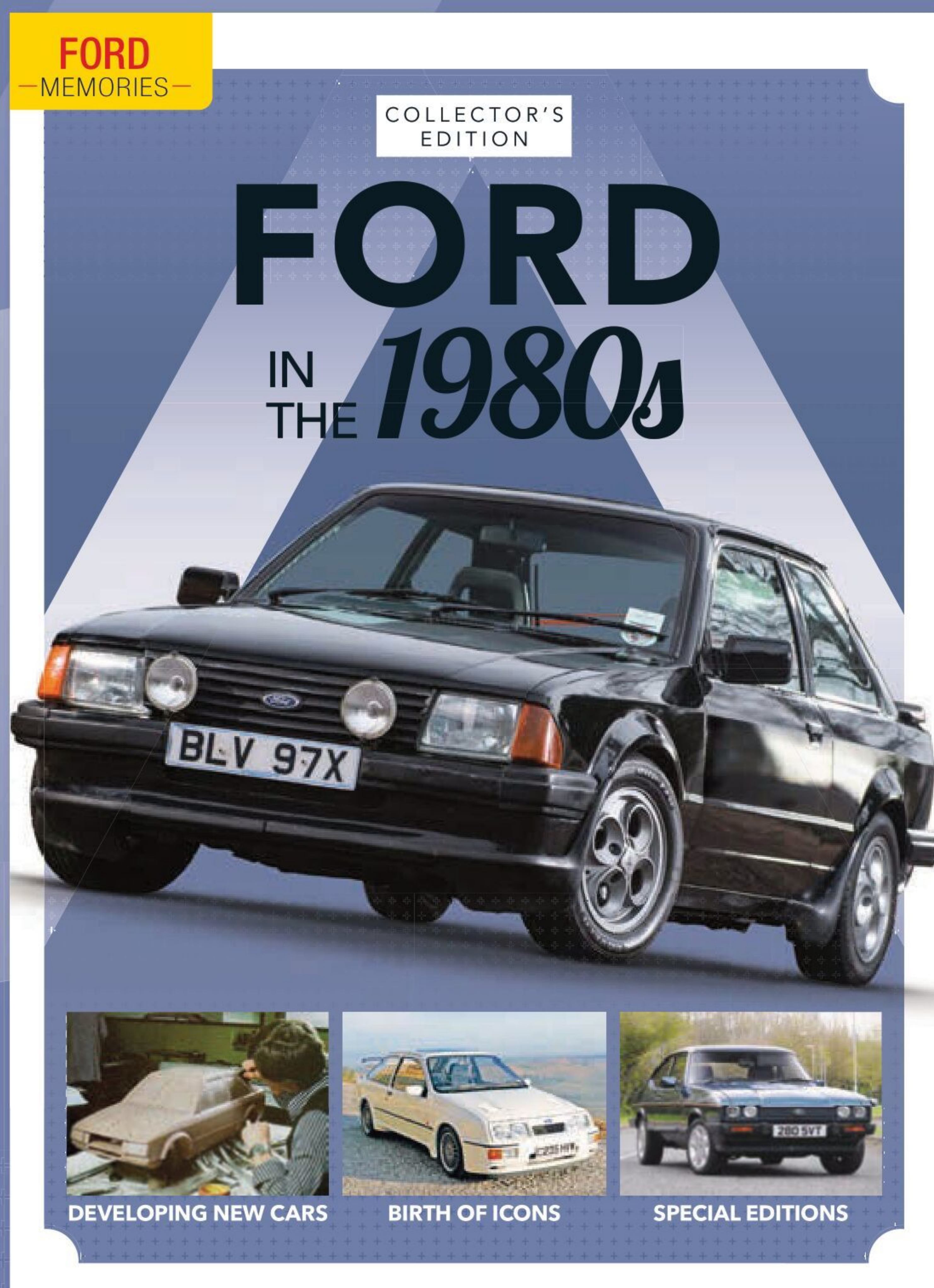
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Second light

Unearthing the 'lost' lightweight, chassis S850660, back in the late nineties was extensively reported on. Here, we revisit the time Jim Patten was given the opportunity to get behind the wheel and talk of its new life back in competitive action once again.

It was in the June 1998 issue of Jaguar World that we reported on the discovery of the 'missing' lightweight E-Type, chassis number S850660. After 35 years of slumber, its discovery was nothing less than sensational. That this one of a dozen was completely original and accompanied by many parts – some in unopened packages – made it

even more remarkable. Fast-forward to March 2011, and we now have the chance to drive it.

Before doing that, however, and while we told the story of this car in detail some years ago, including its recommissioning at Lynx Cars, we make no excuse for running through the outline again here as it is a fascinating tale.

LIGHT YEARS

As background, it's worth remembering that Jaguar's attitude to racing in the 1950s and 1960s was far removed from Ferrari's. It is said that Ferrari sold cars to go racing while when Jaguar raced it did so to sell cars. The full story of the lightweight E-Types has been told many times before but in essence 12 cars were built using



aluminium construction with an all-aluminium fuel injected engine driving through a heavy ZF five-speed gearbox. Sadly a lightweight was never to win at international level despite, many believe, being fundamentally better than the Ferrari 250 GTO but less developed.

Of the twelve lightweights built, this car was number 3, despatched to Kjell (pronounced Shell) Qvale's British Motors concern in San Francisco to be prepared by Huffaker Engineering, later to build the amazing Series 3 E-Type racer. Sebring in Florida was to see the lightweight's race debut where two cars would face the awesome might of the Ferrari 250 GTO. Driving for Qvale would be Frank Morrill and Ed Leslie. The other lightweight, number 2 (chassis number S850659),

was entered by Briggs Cunningham and driven by Walt Hansgen and Bruce McLaren.

There wasn't much time to prepare the cars for the 12-hour race and in truth little could be done against the formidable opposition from both Ferrari and the Cobras. On the day the Cobras wilted while the Cunningham lightweight suffered brake problems while in seventh, a position inherited by Morrill/Leslie. Reliability and consistency rewarded Huffaker Engineering with its car taking a class win on its first outing. But there were six Ferraris out front and they were never troubled by the Jaguar. Huffaker ran the car one more time but a crash in practice at Laguna Seca put it out of the running. The damage looked more serious

than it was and once repaired it was 'rested' in Qvale's showroom. It didn't hang around long though, and on 29 October 1963, Howard Gidovlenko paid US \$5,230 for the seven-month old lightweight.

Gidovlenko was a walking Hollywood character with unstoppable energy. Of Russian descent the American citizen known as the 'Mad Russian' flew Hurricanes and P-38s in the Second World War netting a bucket load of medals, including the Silver Star and Distinguished Flying Cross. After the war he was involved in breaking the sound barrier and even worked on moon landing tests. Leaving the military he set up shop preparing hot-rod aircraft and also operated Auto Dyne, specialising in performance parts for E-Types (or XKEs in US talk).



LIGHTWEIGHT E-TYPE



Apparently he was a good friend with Briggs Cunningham too.

Despite big plans for the lightweight, including an assault on the Daytona 24-hour race, they failed to materialise. The history file shows correspondence with key figures at Jaguar about possible development with orders placed for many new parts. Sadly little was done and apart from the odd road outing, it led a sedentary life. An imminent divorce led to Gidovlenko disfiguring the paintwork in later years, as he was anxious that the E-Type didn't appear too valuable.

SEEING THE LIGHT

It was Terry Larson of C- and D-Type fame that made first contact after a series of rumours suggested the missing lightweight was nestling in a garage in Los Angeles. Gidovlenko had passed away sometime back and the car had remained with sons Rex and Lex ever since. Larson made

contact and what he saw was, in Jaguar terms, akin to Howard Carter finding Tutankhamun's tomb. There was the E-Type with just 2,663 miles on the odometer. Alongside were boxes and parcels from Jaguar, many unopened since their despatch in 1964. But more poignant was Gidovlenko's USAF uniform, helmet

and period Snap-On toolkit, all just where he left them.

Larson guided the family through the sale where a stunned audience at the 1998 Monterey sports car auction held at the Doubletree Hotel watched the E-Type – still with 35 years of dirt on its paint – soar to the dizzy heights of US \$875,050, a huge



The engine is an exacting copy of the original.



amount of money for the time. John Mayston-Taylor of Lynx Motors was the successful bidder on behalf of a private British buyer.

The E-Type returned to the UK where this writer followed a very sympathetic recommissioning process – which included an engine rebuild and thorough strip of all

components – the results serialised in these pages. It still rates as one of the most fascinating experiences I've ever undertaken, documenting everything as it happened and observing the parts all number co-ordinated just as they were at the factory. We peered into the boxes to see peg-drive wheels, packed by Jaguar back in 1964. Other parts had been wrapped in newspaper dated 27 January 1962.

It was a delicate operation; everything went back without altering the originality of the car. Where the paint was aged it was carefully matched to avoid the gloss of modern materials. With painstaking patience the job was finally done. The idea was to enter a few selected events such as the 1999 Monterey historic race.

In 2003 it was once again at auction, where the Arizona enthusiast Philippe Reyns was the successful bidder. He was to enter the car at Sebring in 2005, Daytona in 2007 as well as the Coranado Speed Festival and Monterey in 2009. Reyns also indulged in road rallies too as screen stickers of various wine runs testify.

When Reyns eventually decided to sell the lightweight it returned to the UK this time with JD Classics, and in May 2010 it passed to serious collector, Michael Tuke. JD was commissioned to carry out its comprehensive race preparation service that would incorporate all

the modern safety features while maintaining the period appearance.

The original engine with its fuel injection system and gearbox was removed and placed aside for conservation while an exacting copy was built to cope with the rigours of modern historic racing.

For the first event Tuke placed the car in the hands of Alex Buncombe and the only lady ever to have won a Formula 1 race, Desiré Wilson. So at the Goodwood Revival in September 2010 it duly lined up with the other protagonists in the one-hour RAC TT where both drivers gave a good account of themselves. Given the unique nature of the car they were not competing for outright honours although they did finish a very respectable twelfth, while Wilson won the prize for the fastest women over the weekend with a lap time of one minute, 30.505 seconds.

LIGHT WORK

Fog hangs heavy over the runway while the chill air bites into the very fibre of my body. I hardly notice as this incredible lightweight E-Type is unloaded. I'd seen it a few times since our first introduction 13 years ago and am encouraged that it looks every bit as original as it did back then. There's nothing fancy about the paintwork, if anything it looks slightly dull. But it is all the better for it. As I open a door one of the original rubbers spills out but I pop it back in and smile, knowing that a dab of upholsterer's glue will be applied later to hold the 1963 rubber in place.

I slide into the same seat that is without doubt the very same as that where Frank Morrill and Ed Leslie squatted during the Sebring 12-hours in 1963. There's an incredible sense of preservation inside this cockpit which, bar a few additional – and necessary – instruments remains very authentic indeed. At first I'm confused and cannot find the ignition switch. It is disguised by a huge black appendage but I soon laugh off my gaffe and



The interior is sparse!

LIGHTWEIGHT E-TYPE

give the key and its tail a turn before pressing the familiar button. Fuel is pumped, injectors inject and as soon as the mixture compresses power erupts through the exhausts. Muffled to meet today's stringent regulations, the noise is still thrilling. The clutch is heavy but not troublesome while the gearshift action is courtesy of the tough and universally favoured all-synchromesh 'box, well up to handling the power and with decent ratios. It would be easy to stall but I keep the revs tinkling while performing a few low-speed manoeuvres as the engine warms.

Tickover is smooth without any fluffing of the plugs, proving how well the injection is set up. Jaguar had been keen to put fuel injection on its road cars and worked on this development since the late 1950s, but it wouldn't be until 1975 that it became a production reality. But today, where traffic is non-existent, the system is about the best setup

we could have had from the period. Winter has been unkind to Gosfield, our favoured test track, and there are potholes along the straight so I have to plot my course. After a few dummy runs to spy out the obstacles I'm able to put some weight on the throttle. Acceleration is very impressive and from the initial stab in the back the power rolls on nearing the red sector on the tacho before slipping through the gears. This 'box is good and ratios well chosen.

There's absolutely no concession to anything but speed. Debris picked up by the tyres is flung unceremoniously into the bodywork so that even the tiniest pebble is amplified. Every mechanical sound resonates through the cabin, captured by the fixed hard top, virtually an integral part of the car. The mix of these sounds, with the rush of the wind and the exhaust combines to exhilarate and pump the adrenalin. Coming down the 'box is as smooth as in a road car while

the brakes – using off-the-shelf Mk IX callipers – are easily up to the job today, although I'm guessing the Buncombes and Wilsons of this world will have their work cut out at Goodwood, but no more so than any of the other drivers!

The steering is so direct that the slightest input has us turning Gosfield's bottom circle in an easy well balanced way. With more courage and different circumstances – not to mention consideration of its value and, believe me, that is scary – this would be a fabulous car to push on. The combination of decent raw power and a well-sorted chassis would be so rewarded in capable hands.

The fog remains, the cold is relentless but I don't care. I've waited since 1998 for this drive and a little bit of British weather isn't about to dampen the experience. It is a fabulous car and surely one of the most significant and original historic racers in existence.

“Fuel is pumped, injectors inject and as soon as the mixture compresses power erupts through the exhausts.”





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Hope, no glory

It is nearly 50 years since the Broadspeed XJ12 Coupe made its competition debut. Fast but fragile, the V12 coupe never achieved its full potential before the programme was prematurely stopped after just one season. We explain why...

Words Paul Walton

It would be easy to dismiss the Broadspeed XJ12 Coupe's early retirement from its 1976 Silverstone Tourist Trophy debut as a representation of the car's racing career. Always fast, but not always reliable, its brief racing career was peppered by retirements and mechanical issues. As a result, the car's fragility always overshadowed its true potential, which was a great disservice to the car.

Take a closer look at the Silverstone results and you'll see the car showed promise from the outset, taking not just pole position, but the fastest lap, too. With a crack team of British drivers at the helm, it had everything it needed to conquer the European Touring Car Championship.

So where did it all go wrong?

The man behind the project was Ralph Broad. He started his career in 1941 when, aged 14, he took over the family garage after his father died. He began racing in 1955 and was one of the first to see the Mini's competition potential, buying an early example in 1959 and winning his class first time out at Silverstone, smashing the 850cc

lap record. He established Broadspeed Engineering three years later and was soon rivaling the works Cooper team in the British Saloon Car Championship. Success attracted works support from BMC for an assault on the European Touring Car Championship in 1965 resulting in class wins at Monza, Spa and the Nürburgring for drivers John Fitzpatrick, John Handley and Broad himself.

In 1965, Broadspeed transferred its allegiance to Ford, and prepared an Anglia for Fitzpatrick, in which he won the 1966 ETCC crown. In the Seventies, the team was a regular winner in the British Saloon Car Championship with Escorts and Capris.

In 1974, after a decade with Ford, Broad made the move to British Leyland, preparing a Triumph Dolomite for driver Andy Rouse in the British Saloon Championship, who won his class that year and overall in 1975.

Encouraged by this success, Broad set his sights on a bigger prize, with a completely different car – the European Touring Championship with a V12 Jaguar. Broad





The sole XJ12 Coupe at the 1976 Silverstone Tourist Trophy was fast, but retired.

believed the 5.3-litre engine would be ideal for competition – just as Tom Walkinshaw later believed the XJ-S could be transformed into a successful racing car.

In the mid-Seventies, Broad approached Jaguar's then-new chairman Geoffrey Robinson about racing the soon-to-be-announced XJ-S, but, following advice from Jaguar's engineering department, his offer was rebuked. Jaguar's chief engineer, Bob Knight, was determined that no Jaguar should be raced by an 'outsider.'

However, Broadspeed's successes with the Dolomite had raised its profile and reputation within Jaguar's parent company, British Leyland, so Broad tried again the following year. With all Leyland's motorsport activities centralised, that time he got his way. However, Leyland instead chose the XJ12 Coupe since it was thought that the rear of the new XJ-S would be too narrow for Group Two homologation, the rules adhered to by the European Touring Car Championship.

So a bare shell was duly delivered to Broadspeed's workshop in Southam, Warwickshire, where Rouse got the job of developing this large saloon into a

racing car. It would be fair to say first impressions weren't good.

Says Rouse, "When we got the first car to evaluate there was also a Rover SD1 in the car park, and I can remember – after looking at the Jaguar – going into Ralph's office and saying, 'We've got the wrong car; we should be racing the Rover.'"

Rouse considered that developing the V12 would be quite a challenge. Group Two regulations required a wet sump, so a modification was made to use a system of chambers and baffles to counteract oil-surge under extreme conditions. At least three engines were destroyed in its development.

Other changes included increasing the engine size to 5,416cc and for Lucas mechanical fuel injection to take air from a specially designed ram-effect plenum chamber. Broadspeed's specification also included 12:1 compression pistons and other components sourced from Cosworth Engineering. Jaguar's close-ratio gearbox was coupled to a single-plate clutch that was hydraulically operated to ensure a high clamping load with reasonable pedal pressure.

For Rouse, though, the biggest issue was weight. "The car weighed

1,400kg, so it was always going to be an uphill struggle."

Excited by the prospect of Jaguar racing again, Leyland publicised the car early, unveiling it at Browns Lane on March 24, 1976. A few days later, the 1975 Le Mans winner, Derek Bell, demonstrated it at a wet Silverstone.

Bell had been part of the programme from the very start, even before the XJ12 Coupe was chosen. "It was Simon Pearson (Leyland Cars' PR motor sport liaison manager) who contacted me and said, 'How about driving for Leyland in the ETCC?' However, he couldn't tell me much because he didn't know what was happening."

Bell had grown up watching Mike Hawthorn and Tony Rolt win at Le Mans with the D-type, and was pleased when he finally discovered what the car would be. "It was great to drive a big Jaguar early in my career, but the sad fact was, I wasn't driving a Jaguar; we were always told it was a British Leyland product."

There was no British Racing Green in sight. To prove who was behind the project, the big coupe was painted in Leyland's corporate colours – white and blue – plus the company's logo was displayed prominently on the

BROADSPEED XJ12C

front wing and the Jaguar leaper was banished to the rear door. "But we drivers knew it was a Jaguar," continues Bell, "and that meant a lot."

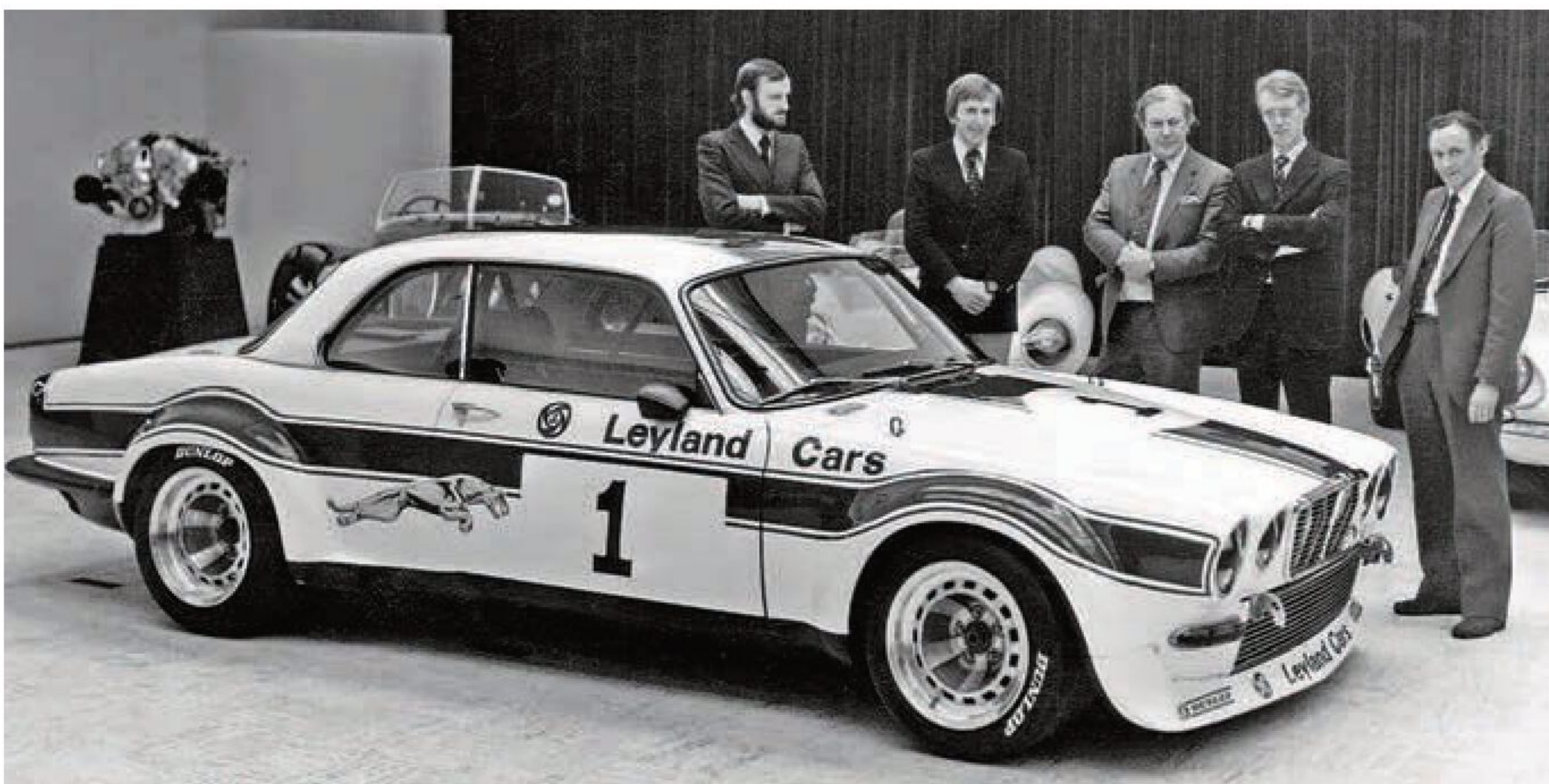
From the start, Leyland was confident the car would be successful. The head of PR even stood up and said, "This is the car we're going to win at Salzburg with in two weeks." "We all looked at each other, obviously thinking the same thing – we hadn't turned a bloody wheel yet!"

Despite Leyland's confidence, development issues meant the car was nowhere near ready when the season started. "We kept waiting to go testing," says Bell, "but were told it wasn't ready. There was a multitude of problems, mainly that the engine wouldn't run very well. It was a new project and, although Ralph had done enough of them, never a bloody great big car like that."

Aware of the issues with the development, Broad was willing to wait rather than race an unprepared new car. "I am determined not to prejudice this long-term race programme for the sake of one event," he said in the season opener at Mugello. Bell raced a Dolomite Sprint at the second round in Austria, partnered by former Daimler apprentice-turned-racing-driver David Hobbs, but retired on lap 70.

It wasn't until the RAC Tourist Trophy at Silverstone circuit on September 19 that the XJ12 Coupe finally made its competition debut, a single entry for Bell and Hobbs, Rouse being back on Dolomite duties. "Ralph wanted the best driver pairing for the XJ12, but I was more than happy to drive the Dolomite again anyway," he said. Admittedly, the car was wearing sticky Dunlop qualifying tyres, but Bell put the big Jaguar on pole with a time of 1m 36.72s, almost two seconds faster than second-placed Pierre Dieudonné's time in a BMW CSL 3.0. As the race report in Autocar (September 25, 1976) put it, 'Jaguar has arrived.'

After the flag dropped, Bell immediately took the lead to the



The 1976 unveiling of the Broadspeed XJ12 coupe at Browns Lane. Standing around the car are (L-R) Simon Pearson (Leyland Cars PR, motor sport liaison manager), Derek Bell (driver), Tony Thompson (chairman of Jaguar operating committee), Richard Seth-Smith (Leyland Cars PR product affairs manager) and Peter Craig (director, Browns Lane plant).



Derek Bell demonstrates the Broadspeed XJ12C at a wet Silverstone in March 1976.



Outside the Browns Lane office block during a 1976 Jaguar Driver's Club event with (L-R) Andy Rouse, JDC chairman David Harvey and Ralph Broad.



On Brno's long straights, the two XJ12 Coupes reached 170mph.

delight of the partisan crowd. However, under pressure from Gunnar Nilsson in a BMW, Bell applied power too early coming out of Woodcote, causing the Jaguar to jump over the first chicane and go sideways in the middle of the Esses. Nilsson saw his chance and closed the gap, his BMW drawing alongside the XJ12. Although the Jaguar was just ahead as the pair passed the pits, Bell touched his brake pedal and Nilsson sailed into the lead.

This was the pattern for the following few laps: Bell having advantage under sheer power, Nilsson's BMW making ground up during braking. 'The BMW was

taut and two-wheeling, the Jaguar wallowing and wonderful,' read the Autocar report.

And then both cars suffered tyre trouble at the same time. The left rear Dunlop had lost grip and began to deflate. "Tyres were always a problem," says Rouse today. "The tyres were crossply, but it was such a heavy car, they were only good for about five laps before the rubber went to pieces. Dunlop never really cracked the problem."

Bell was unable to pit on lap 13 because he was boxed in behind a slower car coming out of the chicane, so had to postpone for one more lap.

As he accelerated down to Stowe, the tyre disintegrated due to the huge amounts of heat the fat rubber created, damaging the bodywork. Thankfully, he managed to limp back to the pits for fresh rubber and for the mechanics to tidy the rear wheel arch. Four laps later, Nilsson suffered the same fate, emerging from the pits at the same time as Bell completed his first lap on new tyres.

Lap after lap, the two cars were equal, although the British driver was slowly emerging ahead. At the routine pit stops, Bell swapped with his teammate, David Hobbs.

Sadly, on Hobbs' sixth lap the Jaguar had to be retired for good. The left rear driveshaft, weakened by having to take a tyreless rim back to the pits earlier in the race, snapped at its outboard end as Hobbs pulled out of Becketts. Nilsson had similar bad luck, suffering from a faulty fuel collector tank, and the race was finally won by the only car not to suffer from problems: the BMW of Xhenceval and Dieudonné.

Regardless of the outcome, Broadspeed had made clear its intentions for the following season.

Silverstone was the XJ Coupe's only race in 1976, but the team was back in full force for the 1977 season opener at Monza with two cars: for Bell and



The magnificent Broadspeed developed 5.4-litre V12.

BROADSPEED XJ12C

Rouse, and John Fitzpatrick and Tim Schenken (Hobbs having defected to BMW). Now with a large boot spoiler, 19in alloys and in BL's new red, white and blue competition livery (minus the leaper altogether), due to the deletion of the power-assisted steering they were a little lighter, too.

In practice, both cars suffered from oil starvation, but Fitzpatrick and Schenken's car received the only spare engine simply because it broke down first. However, the pair returned the favour by taking pole, beating the second-placed BMW of Dieter Quester by a second.

After a ragged start by Fitzpatrick, the BMW broke into the lead, briefly. Thanks to the Jaguar's huge 550bhp compared to the German car's 340bhp, the XJC reached the initial chicane first, and quickly drew away from the BMW. Disastrously, despite remaining in the lead until the pit stops, just two laps into Schenken's drive the Jaguar suffered a lack of oil pressure, and was forced to retire.

At the Salzburgring, the Jaguars lined up first and fourth in the grid. Rouse lead from the start, but Schenken's car was again forced to retire, this time on lap 11 due to a driveshaft failure. When Rouse had to pit after a stone put a hole in the radiator, the driveshaft was noted to be failing on this car, too. It didn't rejoin the race.

Things went from bad to worse at Mugello. The transporters arrived, cars unloaded, but BL's management insisted that they would only run if results to the engineers' tests on the driveshafts (carried out at Browns Lane) were satisfactory. No news arrived, so the cars were reloaded and, as the race started, the transporters headed for home.

Remembers Andy, "The driveshafts were under-specified for the size of the wheels so the hub-shafts kept snapping. Jaguar kept trying to make better ones, but they kept breaking the machine that was testing them. I stayed on at Coventry to collect



The XJ12C of Fitzpatrick and Schenken on the grid at the Nürburgring.

the shafts and fly out to Italy, but I didn't get to go. It was all a bit of a shambles really."

The XJ12s weren't at Enna in Sicily two weeks later either, but returned for round five at Brno, in Czechoslovakia. Following two weeks of testing at Goodwood, the driveshafts were considered safe. On the Czech circuit's fast straights, where the Jaguars could reach 170mph, both cars started from the front row. "We were really flying," says Bell, who took pole.

Yet despite the Jaguar's speed in qualifying, the race proved as frustrating as everywhere else. This time, Bell retired early due to a seized gearbox and Fitzpatrick's car suffered a high-speed blowout that ripped off the rear bodywork and damaged the suspension. He was forced to limp back to the pits for repairs to the rear suspension, and, after rejoining the race, finished a distant 12th overall and third in class. Not a great result for a company that once dominated Le Mans; surely things had to get better?



Starting from pole, Fitzpatrick built an early lead at the Nürburgring. He retired on lap two.



At the Nürburgring in 1977, Broadspeed's mechanics spent all practice removing, repairing and replacing engines. At least on this occasion they could enjoy success, with the Rouse/Bell car finishing second

The Nürburgring, in Germany, was next on the ETCC calendar. The rules regarding dry sumps had been relaxed leading up to the race, but Broadspeed hadn't been in a position to take advantage of it. Consequently, with their wet sumps, both cars needed several engine changes during practice, a result of oil surge caused by the twisting nature of the long circuit. "The track's constant undulations, plus lots of hard braking, exaggerated the problem," explains Andy.

That wasn't the only headache facing the four drivers. "It was always a hard car to drive," says Andy. "There were no power brakes and the front wheels were 12in wide, but 19in in diameter; with no power steering, driving around the 'Ring was like being sentenced to hard labour."

Yet the two cars still lined up first (Fitzpatrick/Schenken) and third (Bell/Rouse). This speed was carried into the race, too. Leading from the start, it took Fitzpatrick just 8m 29.8s to complete the first lap, averaging an incredible

110.46mph over the 13-mile course. So great was the Jaguar's lead, it took Quester's BMW another 12 seconds before it passed the pits. Lamentably, the Jaguar's V12 engine failed not long after, on lap two, ending what had been a fabulous performance.

The second car ran a more controlled race, which had been Bell's plan from the start. Says Bell, "I knew we couldn't beat the BMWs due to the sheer weight of the car, so I said, 'Let's race to finish second.' And we did."

Despite an unscheduled pit stop to replace a bent rear wheel, the car finished two-and-a-half minutes behind the winning BMW of Gunnar Nilsson and Dieter Quester. A fine result, proving what Broad had known all along, that the V12 engine would make a competitive racing engine and hinted of more to come. Sadly, though, time wasn't on Broadspeed's side.

Zandvoort in Holland was next and Broadspeed finally had dry sump lubrication for the Fitzpatrick and Schenken car, although its new twin Cosworth scavenger pump drives broke during practice and the duo qualified just fifth. With the wet sump car of Bell/Rouse lining up third, this was the first time there hadn't been a Jaguar on the front row. But, by using the car's magnificent power,



The remaining XJC starts from pole at Monza in 1977.

BROADSPEED XJ12C

Rouse was able to take the lead by the end of lap one and stayed there – until a rear puncture sent him to the pits. After rejoining the race, he reached third – before the differential gave up. Schenken's car needed four scavenge-pump drive changes before retiring for good.

Next was the 1977 Tourist Trophy, once again held at Silverstone. A year after its debut and with a second place under their belt, the team was growing confident. "We all felt we were going to win that race," confirms Derek. So did the spectators. Says Andy, "It was only when we got to Silverstone did we realise what people thought of the car: a massive crowd turned out to support us."

The weekend started well when the two XJ12 Coupes qualified first (Bell/Rouse) and second (Fitzpatrick/Schenken). Early leader Schenken spun, but recovered to third – before retiring for good when a front hub sheared. Rouse took the lead in the second car and built up a comfortable lead over Quester's BMW before handing over to Bell on lap 38, who increased the lead further to 27 seconds. On lap 75, the British driver needed to pit one more time for more fuel, whereas the BMWs had completed all of their scheduled stops. Back behind the wheel, Rouse was faced with a 20-second deficit behind Quester. With 30 laps remaining, and with Rouse on a charge, maybe, thought the crowd, he could do it. Alas, rain began to fall, slowly at first before coming down heavier and harder. As a result, the gap between the remaining Jaguar and the leading BMW held steady at 15 seconds before, seven laps from the end, he lost it coming out of Abbey Curve on a patch of oil. Hitting the barrier hard, it ended his race, and Quester's BMW took victory. Although Rouse was still classified fourth, breaking the lap record for a Group Two touring car along the way, it was of little comfort.

The Broadspeed transporters



Silverstone, 1977 and a rare sight; both Broadspeed XJCs on track at the same time. Car number 2 (Schenken/Fitzpatrick) retired due to a front hub failure.

headed to Zolder in Belgium next – where the cars retired due to a seized gearbox and a broken valve spring.

After a tumultuous and unsuccessful season, Leyland's bosses finally officially pulled the plug on the project and the cars didn't compete in the season's two races at Jarama and Estoril.

Disheartened, Ralph sold Broadspeed to one of his former racing drivers, John Handley, not long after and retired to Portugal where he ran a wood burning stove business. He died on September 17, 2010.

If Leyland had stuck with it for another season," ruminates Andy, "they'd have got all the results they'd wanted. The BMW was out of homologation at the end of the season, which meant we'd have been the top car and we'd have had more time to sort the issues."

Rouse blames the car's poor results mainly on a lack of backing from Browns Lane, plus Leyland not fully committing to the programme. "Jaguar didn't really want us to do the project. They wanted to do it themselves so they didn't support us at all. But it was a bigger job than Ralph realised to turn the XJ12 Coupe into a racing car and there simply wasn't enough time, or people, to do what was needed to be done. Plus, there was no big contract with

Leyland, the sort where they put some money up front to invest into the cars. Instead, they just gave us bits from the factory and Ralph billed them every month for the labour." He also reckons Broad thought it would be as easy to transform the Jaguar into a racing car as the Dolomite Sprint had been. "But the XJ12 was a bit more difficult than that," he admits.

The other issue was the V12's fuel consumption. "We always had to make two stops, whereas the BMWs had to make just one so we had to drive much faster to make up for it." Despite the car's problems and the premature cancellation of the programme, Bell still has happy memories of the car and of Broadspeed. "It was never good to drive," he admits with a laugh, "but it was a great experience and it was great to be with a British team." He was reunited with the car in 2015, taking Jaguar Heritage's example up the Shelsley Walsh hill climb. "It was wonderful," he says simply of the experience.

The record books might state the Broadspeed XJ12 Coupe is Jaguar's least successful racing car, but you need to look further than that. It should be better remembered as one man's fast, if flawed, attempt at taking Jaguar back to racing when the company itself wasn't interested in doing so.

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Legend of the racetrack

Not many cars can claim victories at the highest level in both Europe and Australia – but Mike Roddy's awesome XJ-S is one of the few. We tell the tale of this fascinating racing machine.

Words: Richard Holdsworth



The XJ-S you see before you is one of just four developed by Tom Walkinshaw Racing over the 1983 northern hemisphere winter for the following season's European Touring Car Championship – and one of the three selected to go into battle. It certainly proved successful, for the racer that's now in the hands of Melbourne-based Mike Roddy went on to score an outright victory in the Spa 24-hour race, piloted by Hans Heyer, Tom Walkinshaw and Win Percy.

With Percy again at the wheel and

partnered by Chuck Nicholson, the XJ-S claimed another memorable victory at the Donington 500, and would have won the Silverstone Tourist Trophy but for a sudden squall that saw the slicks losing grip within sight of the chequered flag, causing the car to crash. (The Jaguar was not alone, with five other cars succumbing to the deluged track and ending up in the gravel.) But that was not the end of the 1984 season for the XJ-S, which was repainted in the black and gold colours of John Player Special

and shipped to the streets of Macau, where it achieved an impressively close second place. Today, the car still carries some of the original traces of that distinctive livery.

Most onlookers assumed that this was the end of a memorable – if rather short – racing career for the Big Cat. Fortunately, however, Jaguar Rover Australia had been following events around the world, and it dawned on an astute management that the team of three Jaguars would stand a real chance at Australia's



Mike Roddy leading the pack in the 2018 Adelaide Motorsport Festival.

premier long-distance race: the Bathurst 1000. The 1985 race would be the first under the new International Group A rules, which to an extent caught out the traditional Aussie teams, who still harked back to the mighty Group C cars and the regulations that governed them.

After the 1984 season exploits throughout Europe and at Macau, the future for the three TWR-prepared XJ-S cars was uncertain. Tom Walkinshaw's car was sold into the private collection of one of his close friends and looked destined to have an easy retirement, with only occasional demonstration runs and a few displays to an appreciative Jaguar public. The car shown here – eventually destined to be owned by Mike Roddy – had suffered race damage, and it too looked to have an uncertain future. Then came the call from Down Under, with Jaguar Rover Australia seeing the opportunity for grabbing the limelight at the nation's greatest long-distance saloon car race, held on the challenging Mount Panorama track. Tom Walkinshaw's car was duly re-acquired by TWR and rebuilt into 1985 specification under the supervision of Ian 'Blue' Dorward, while Mike Roddy's car was sent to bodywork specialist QCR Motors of Nuneaton, where it would have a

complete rebuild under Dorward's watchful eye. The trio – now sporting 1985 race specification – were ready to compete again and were shipped to Australia to do battle.

HEADING SOUTH

The Bathurst 1000 is the highest-profile motor racing event in Australia, even eclipsing (and capturing more attention than) the Australian Formula One race. You'd be hard pushed to find an Aussie petrolhead who isn't glued to the TV screen at some stage during the Bathurst 1000. But it still represented a bold and imaginative move by Jaguar Rover Australia, with the company backing up the idea via a healthy budget in order to get the job done.

Strangely, it seems that despite the victories enjoyed by Mike Roddy's car, it wasn't considered to be the front runner of the three Jaguars, and didn't even get a place on the giant pantechnicon transporter that had been hired and sign-written specially for the purpose. Instead, the car was accorded number 10 and arrived at the 3.85-mile Mount Panorama track, 136 miles to the east of Sydney, on a hired trailer pulled by a Land Rover. Out on the track, meanwhile, the race strategy for Jaguar number 10 was purely as a back-up if cars numbered

8 and 9 struck trouble – which was what happened, although it wasn't all plain sailing for number 10.

While leading the pack with Aussie John Goss at the wheel, the car's Recaro carbon-fibre seat broke free, and he and his co-driver – Armin Hahne – spent the second half of the race bracing themselves against the roll cage when number 10 went 'light' as it topped the brow of the mountain section and hurtled downhill. Any racing driver will tell you that he gets the feel of the car through the seat of his pants, and to race at Bathurst – setting fastest lap plus cross the finishing line first – with a seat that has come adrift certainly deserves a special place in the annals of motor racing history.

Despite problems besetting car number 8, Tom Walkinshaw and co-driver Win Percy brought it home in third place. This was something of a Jaguar bonanza and, quite naturally, Jaguar Rover Australia wanted to capitalise on its success. Number 10 went straight to the company's prestigious Sydney showroom, where it commanded the prime spot for the next few months. The Jaguars were then shipped to the UK to be made ready for the next season's racing, the first task being to learn from the lessons of 1985 and the problems

XJ-S TWR RACER

that had beset cars number 8 and 9. It is possible that Tom Walkinshaw could have brought car number 8 home in first place had it not been for a damaged oil cooler, which left him stranded in the pits for an age while it was fixed.

Back in the UK, the cars were stripped back to basics – and then in the rebuild, some heat shielding and coatings that were considered unnecessary were discarded, thus taking the emphasis off endurance performance and placing it on sprint capabilities. Weight saving was also a priority, even down to replacing steel bolts with lighter alloy components. The cars were ready to repeat their success at Bathurst – but with less than a week to go before shipping them to Australia, Jaguar Rover Racing cancelled the project.

CHANGE OF PLAN

What was a down-side for racing enthusiasts Down Under became a red-letter day for fans at Fuji Speedway in Japan, followed by New Zealand for the inaugural World

Touring Car Championship, where two of the Big Cats were entered at two venues – the first in the streets of Wellington in the North Island, and then on to the South Island circuit at Pukekohe, some 25 miles south of Auckland. In testing for Wellington, the car that Mike Roddy was ultimately to buy suffered damage and was transported to Auckland and rebuilt by Ian Dorwood and panel wizard Mike Carey.

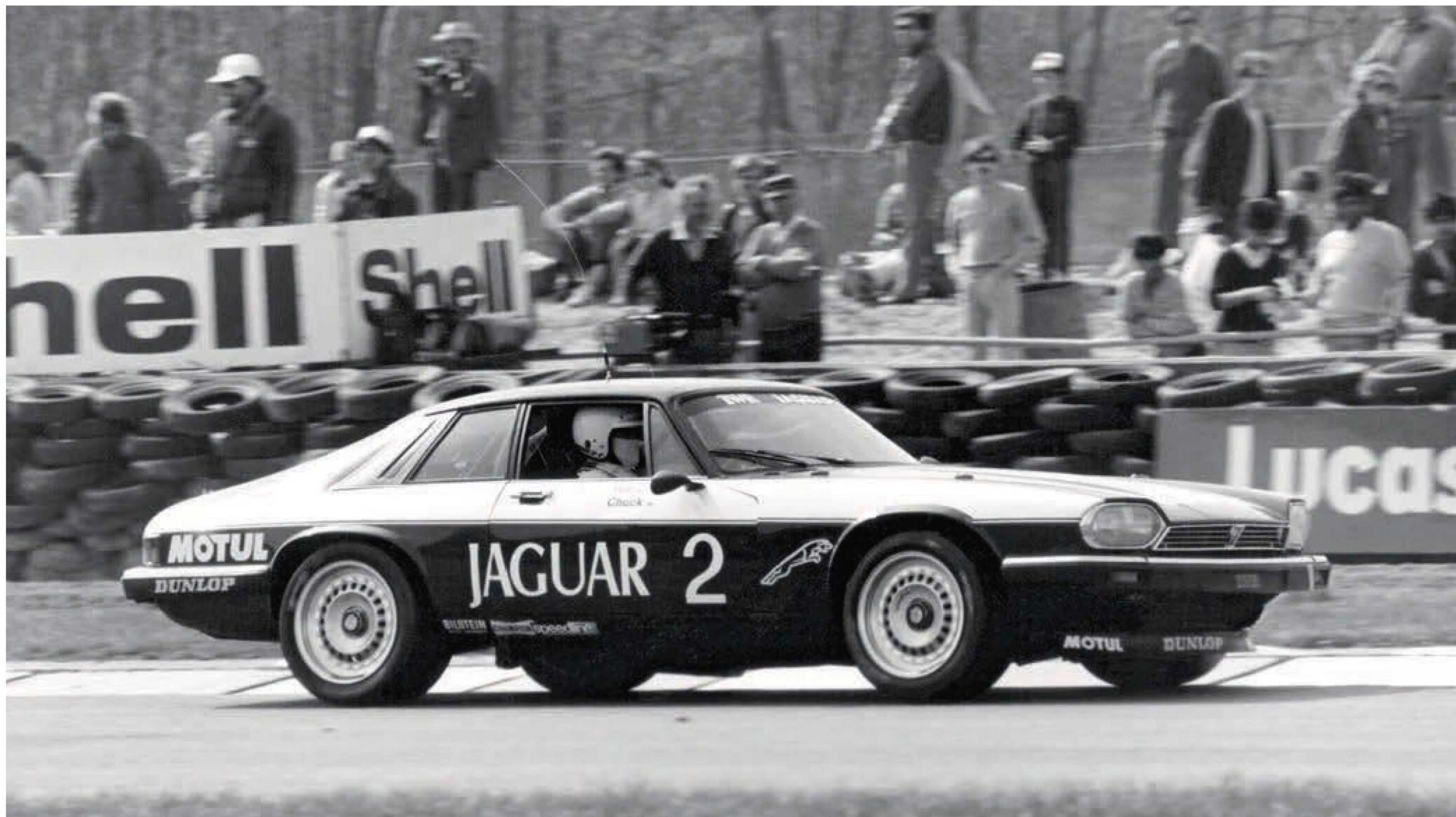
Further misfortune followed during the race itself, when a tyre blew on the same car just before a pit stop while challenging for the top slot. That turned out to be the final event for Jaguar Cars and Tom Walkinshaw. However, the sister car went on to finish a strong second at Pukekohe, with Armin Hahne and Win Percy at the wheel, giving Group A Jaguars a marvellous send off.

Retirement beckoned once again for car number 10, the hero of Bathurst and probably the most successful Jaguar touring car of all time. It was sold to a private collector in the UK and then sold on again to

an enthusiast north of the border, only being glimpsed in public in the late 1990s on one of its rare demonstration laps at Donington. Years passed, but in 2005 it was a case of Australia entering the picture once again in the form of Mike Roddy, who operates a garage, workshops and showroom for prestige cars in the Melbourne suburb of Moorabbin, along with his son Jordan and daughter Tegan. Mike, a Jaguar man through and through, does not mince his words: "This car achieved the greatest feat for the Jaguar marque in Australia, and when I heard it might be for sale I had to act."

Mike and Jordan flew to Heathrow to meet Paul Davis, former crew chief of the successful TWR team, and the three took a plane to Aberdeen where the car was garaged. "I needed the car authenticated, and who better than Paul? I looked him in the eye and the reaction was immediate: 'Here is the real thing, Mike!'"

Thus started the next chapter in the life of this famous Jaguar, as the father and son team shipped the



A classic shot of the XJ-S in action during its European competition career.

Mike Roddy's XJ-S was one of three that went into battle in the '84 European Touring Car Championship.



XJ-S back to Australia – the country where the car had truly made its mark on the racing scene. The Aussie twosome was keen to become the latest custodian of this historic Jaguar, and the car now resides at the Moorabbin garage that's appropriately named Mike Roddy Jag Services. The XJ-S was never destined to just sit peacefully in a showroom and gather dust, however, as the new owners promised to unleash the roar of the V12 on racetracks around Australia once again: "It's not a museum piece," says Mike with a grin!

RACING SPEC

My Aussie wife, Heather, and I are sitting in our Melbourne home, not a million miles from where car number 10 resides, with Mike Roddy telling us the tale. He has brought with him a stack of books, photographs, documentation, facts and figures covering the life of this very special Jaguar XJ-S, with the evidence piled high on our living room table confirming just how fastidious the car's latest owner is.

We are learning that the moment the Bathurst winner arrived in its new Australian home, it started to reveal some of the secrets that had made it so potent. Mike explains: "Rules and regs for the Group A races stated that competition cars should be closely related to their production siblings, so the car uses the 5.3-litre V12 engine allied to a Getrag five-speed gearbox." There's another smile: "But there is a lot more to it than that and the interpretations of those rules."

It seems that in partnership with Cosworth's engine guru, Alan Scott, the motor was completely redeveloped for racing. But it wasn't only the V12 that benefitted, as the Roddys soon discovered that the car was littered with many performance-enhancing tricks and gadgets. One is the secondary pump for engine oil, located in the left-rear quarter panel; by flicking a switch, the driver can replace any oil that might be burnt during a long run on the track. Mike Roddy is a race driver, piloting the XJ-S with verve and dash, and he knows what's needed: "This simple

trick eliminates much time in the pit stops and allows the driver to top up engine oil, coolants and transmission oil while at racing speeds..."

This was just one example of how far a team of engineers had to go in the competitive world of touring car racing when the Jaguars were making a name for themselves. It seems that many of the teams stepped right up to the limit when interpreting the regulations. And TWR, in particular, was adept at looking at the very definition of the wording as it was written, building its cars accordingly.

Mike Roddy says it's clear that is what happened with the XJ-S: "One example was the power steering – or not power steering, in this case!" Mike explains this apparent contradiction in terms: "Instead of having a conventional power steering pump, the XJ-S has TWR's version of a power steering pump, which is a dry-sump scavenge pump from a Cosworth DFV Formula One engine. And instead of pumping power steering fluid, it scavenges engine oil from the sump

XJ-S TWR RACER

feeding the engine and engine oil coolers. It is still technically a wet sump, but the way it works is like a twin-pump system feeding the oil coolers." Engine oil gets hot – very hot – in a race car and the Jaguar solves that problem by having not one but two massive coolers.

With no power steering for the Big Cat, Mike knows what it's like to work the steering wheel on car number 10 around some of the tracks of Australia: "You've really got to manhandle it even at racing speeds," he tells us. "This would sort the men from the boys... I wouldn't want to do that over 24 hours at Spa!" And Mike Roddy is a big man at well over six feet tall!

When it comes to the suspension of the race XJ-S, it seems that the lines were even more blurred in an effort to get the most out of the car. "At the rear, there is a traditional Jaguar independent suspension with a cage, Jaguar differential, lower arms, and the drive shafts still act as the top arms," explain Mike. "But everything is heavily revised, and after closer inspection we discovered



that the front and rear wishbone assembly units were built specially for the XJ-S race cars. They look like the same parts that often carry Jaguar part numbers, but in reality they are vastly different from what you buy off the shelf."

It seems it's the same with the engine inlet manifold. "It looks like an

original factory sand-cast moulding, and even has the same part number cast into it," Mike tells us. "Critically though, when we looked closer, we realised the casting was 30% bigger. The rules were probably written in a way that mandated interchangeable components with factory parts and with factory part numbers, so





that they could be used without exceeding what had been stipulated. And this is just one of the reasons why it is difficult to modify an XJ-S destined for racing."

STILL COMPETING

The Roddys are fortunate in that many members of the crew from the Big Cat days moved to Australia and New Zealand when the XJ-S programme came to an end. Some joined the TWR Holden racing team or became an integral part of Holden's Special Vehicle Operations. And today, there are some who will fly in from their homes in New Zealand to keep a watchful eye on the XJ-S when it gets back on track in Australia. Among them is Alan Scott, the original engine designer, and sometimes the car is still crewed by Ian Dorward – affectionately known as 'Blue' Dorward – who rebuilt the

car for the aborted 1986 Bathurst campaign. Rob Benson also helps, as does Dave Roberts from the UK with vital set-up information.

Today the car is kept in first class competitive condition by a small team of technicians, including Philip Carter, Simon Brewer and, of course, Mike and Jordan Roddy, while Tegan keeps an overall eye on the operation.

During our chat at home, Mike Roddy invites Heather and me to see for ourselves the car in action: "We are racing at an historic car event at Sandown Race Track next weekend – you are very welcome." Naturally, we didn't need to be asked twice, and on the day car number 10 looked as good as it would have done when it took the chequered flag at Bathurst. The V12 growled into action and the Jaguar seemed to come alive, just begging to get back on the track and do what it does best.

Before too long, Mike was posting great times on the Melbourne circuit, just as he did when Heather and I first came across the car at the 2018 Adelaide Motorsport Festival, where it thrilled the crowd of 40,000 with the roar of its classic V12. Mike and car number 10 set the fastest times in the sprint that day, along with fastest lap in the packed Heritage Touring Car class, and the XJ-S has also shown its power and pace in two Australian Grand Prix support races.

It is, of course, only right that we give proud owner and racer Mike Roddy the last say: "We give the car its head in selected historic Group A events where its presence is appreciated, Adelaide and Sandown in Melbourne being two such occasions. No ten-tenths, of course, but believe me, the car comes back to life when that V12 howls."

Tom Walkinshaw

Say TWR to any Jaguar enthusiast, and those three letters immediately conjure images of XJ-S touring car and Group C racing success. Here we pay tribute to Tom Walkinshaw, the man who made TWR great.

Words: Mike Jiggle

Back in the late 2000s I had the privilege of spending an afternoon in the company of the late Tom Walkinshaw, my mission to find how a young lad from Scotland took Jaguar by the scruff of the neck and placed it back at the top of the sports car racing world.

Tom's parents were market gardeners, so it was nothing genetic. As a young boy, he cleaned and polished cars at the local garage in Penicuik, Scotland, and was introduced to motor racing by the proprietor. Naturally, the success of

local hero Jimmy Clark influenced him too and Tom's first racing miles were at the wheel of a slightly modified MG Midget.

Logistics was a key Walkinshaw skill, as was discipline. trekking south every weekend to circuits such as Brands Hatch or Silverstone to compete and becoming 1969 Scottish Formula Ford champion was fair reward for his commitment.

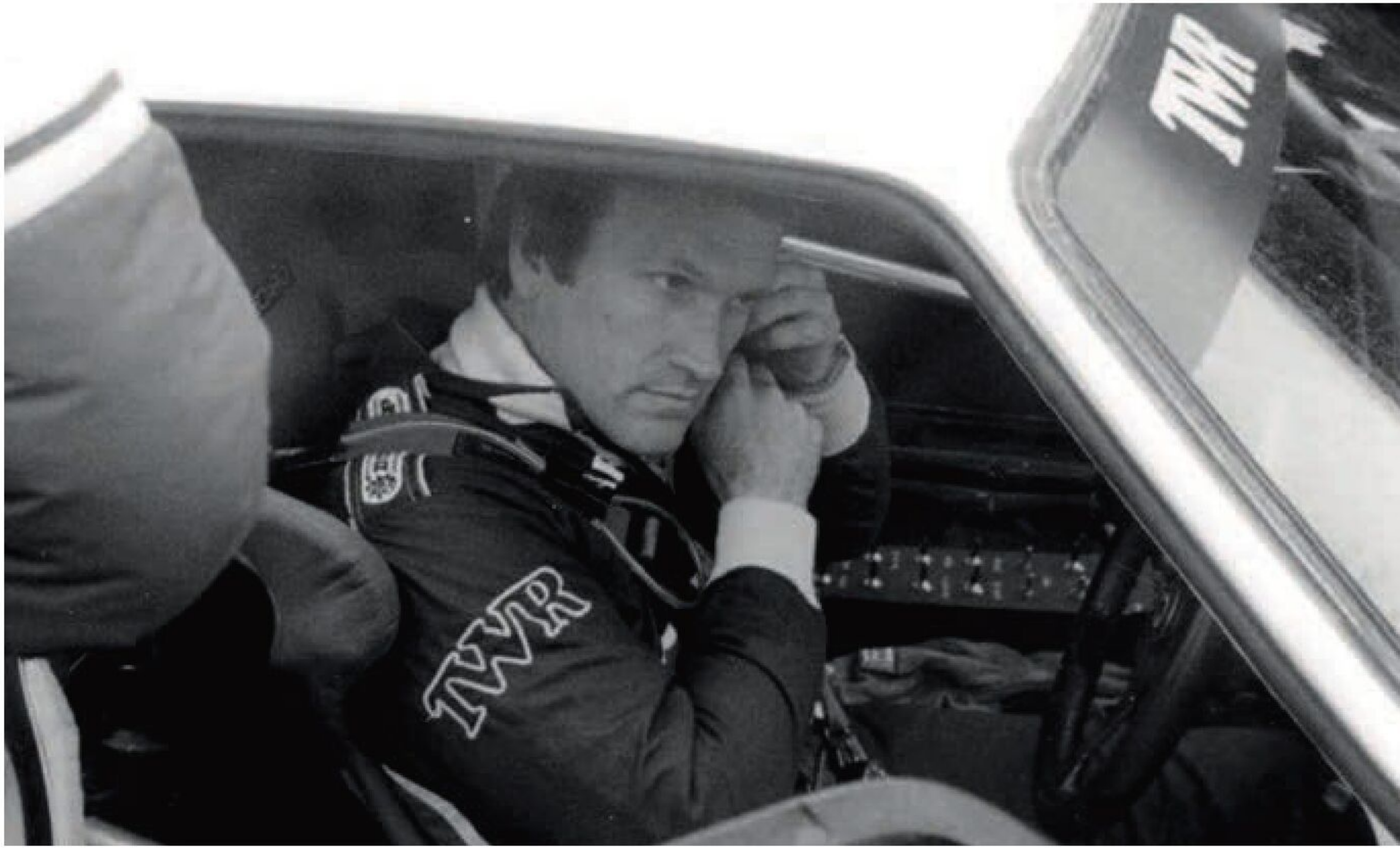
THE ROAD TO JAGUAR

Circumnavigating obstacles which obstructed his path were other

lessons Tom soon mastered. The fuel crisis of the early 1970s could, and did, prematurely halt racing careers. Sponsorship money was tight too, but where others fell, he stepped up and created Tom Walkinshaw Racing which transformed road cars to high performance race cars. Various marques approached him to prepare their own particular models, including Ford, BMW, Mazda, and Rover. And this is where our conversation started; just how did TWR begin a relationship with Sir John Egan? "Through our links with BMW and the Group A championship," said Tom, "the BMW marketing people in England wanted to do something different involving all the dealerships. We had a brainstorming session and came up with the idea of the County Championship which would be for identical BMW 323i saloons with drivers representing the various counties of England. We also had the concession for Mazda racing in the British Saloon or Touring Car Championship, running a 2.3-litre car in a 2.5-litre championship – and we won it, with Win Percy.

"The SD1 Rovers were in the same championship as the Mazda, they were run out of the factory in Abingdon. The cars kept blowing up and weren't very quick – just embarrassing, it was a complete disaster area. I think it was at Thruxton, when someone from the Rover team came and asked if I





Tom, and TWR's, first Jaguar races were with the XJ-S in 1982 – the season saw European Touring Car wins at Brno, Nürburgring, Silverstone and Zolder.

could take a look at their car to see where things were going wrong. I ended up lying underneath their car in the paddock, evaluating their problems. I looked carefully at what they'd got and the way they had put things together. I was asked for my thoughts. I told them there were a number of issues and problems where the car could be made more competitive. I was asked if I, or rather TWR, could do anything for them. I said we could help, but it would have to be for a price. They

asked for a number which I duly gave – naturally it caused them to faint! We ended up doing a deal, it was for £1000 for every tenth of a second we could better their lap times – to a maximum of £20,000.

"It was two weeks before the next race at Silverstone. In the meantime, we prepared the car by making improvements to the inlet manifolds, the suspension, and other things. To cut a long story short, at Silverstone the car was on pole! So, from an

'also ran' we had made a car 2.8 seconds faster. It pleased Rover but made life a little more difficult for us and our Mazda. Rover duly paid out our £20,000 and asked us to talk to them at the end of the season, which we did and that led to us having a contract to prepare the cars for Rover. "From there, I had been requested to talk with their head office (British Leyland), as a chap named Egan wanted to talk about a project for Jaguar. At the meeting John Egan told me he had a serious decision to make – either resurrect Jaguar or close it. They'd had a bad experience with Broadspeed and the 'Big Cats' – something to do with money, of course! We had a look at the Jaguar XJ-S and did a deal with them. We got hold of a truck load of bits and a car. Basically, the deal was to run the car in the European Championship races. If we finished in the top three it would spark off a further three-year contract to continue preparing them. So, we duly did that with sponsorship from Motul, who had sponsored the Mazda."

XJ-S SUCCESS

Following British and European success with the XJ-S, Australia's



TOM WALKINSHAW

blue ribbon race at Bathurst and the gruelling Mount Panorama circuit was the next target. Just driving the heavy XJ-S around the tight circuit would take all the strength and guile Tom could muster, and results were initially disappointing.

"In 1984, I had been invited to drive an XJ-S which an Australian chap called John Goss had built. I went down to drive the car – it was a real animal of a thing. I think we managed to get on the 10th spot on the grid. At the start, I dropped the clutch and the linkage shaft to the gearbox sheared. It left me stranded. At Bathurst, there are some 50 cars starting on the grid, as I was near to the front most of them had to pass me, which they did. Well, except for one of the very last cars. He approached from the brow on the straight – I cannot, to this day, understand how he didn't see me. I was stuck right in the middle of the track and was waving my arm out of the car. He rammed right into the back of me and completely destroyed the car.

"Immediately after that, due to the publicity generated, I was invited to drive the following year. I agreed, but I told them I'd come as long as I didn't have to go anywhere near [the same car]. I was asked for my suggestions on what I'd race, I offered them my own XJSs. After the race, I put a deal to them, which was agreed – so, for 1985, we ran a three-car team at Bathurst – Armin Hahne and John Goss in one car, Jeff Allam and Ron Dickson in another, and Win Percy and me in the other.

"I'm telling you, I wouldn't have liked to drive there every other weekend. I managed to get the damn car on pole, but it was a case of muscling it around the circuit. It was a big heavy car; I use the word 'muscle' deliberately as it responded to that way of driving. It was a real handful but driving it like that it would amaze you with what you could do with it. The major problem was having the big V12 engine in

the front. Driving wasn't very easy without having proper throttle control, particularly out of corners. The car always wanted to swap ends – I think you could have some spectacular offs if you weren't careful. As I've already said, it was a real handful and needed to be driven by the 'scruff of the neck', but it was very satisfying and amazing once controlled."

BACK TO LA SARTHE

The next step was the Holy Grail for Jaguar – the Le Mans 24 hours. Those glory days under the supreme guidance of 'Lofty' England were now distant memories of a bygone motor racing era. The new Walkinshaw way wasn't necessarily the considered view, certainly not the England way. However, that was his great strength – the ability to look outside the box. So, what was the new thinking?

"My, and indeed TWR's, philosophy was always to build racing cars for racing drivers to drive. So, you have to build a car well enough for a driver to comfortably drive the thing flat out. Some say endurance racing is like a marathon, pace yourself and it'll all come good in the end. I don't believe in that concept at all. My drivers needed a car to drive flat out from flag-to-flag – that's racing! With all our cars we either won or broke down. If we won, great! If we broke down, we'd sort out the problem for next time and we'd try, particularly in the early development days, to make any changes bomb-proof. When we went to a race our objectives were pole position and a first place. "I'd delivered Jaguar as promised, using their big heavy XJ-S, with the European Touring Car Championship [in 1984], in just three years, which I have to say was no mean feat. The Group C programme came about after Bob Tullius had been doing various things at Daytona and the IMSA races with his Group 44 team. I had my own views on their car. Jim Randall [Jaguar's chief engineer] had had a look around it too.



"At the Nürburgring round of the ETCC, I'd finished fourth with teammates Chuck Nicholson and Hans Heyer. I'd literally just been crowned the ETCC champion. I amassed enough points there added to those scored in other rounds including my wins at Monza, Brno, and Zeltweg. There were more rounds to go but no one could catch me. It had been a particularly hot day, typically the Dunlop tyres hadn't worked too well in the heat. I was completely and utterly knackered. Jim Randall was there, John Egan too; all I wanted to do was to take a break. John Egan said, 'Well that's it done now. You said it would take three years and you've done it. Now what about Le Mans? We've decided we want your proposal for how we can win Le Mans.' I was so shattered I'm not too sure how, or, if I replied.



"However, we put our thoughts together and offered Jaguar our proposals. The car had to centre around the heavy V12 engine – which we had already proved with the XJ-S. If we'd used typical chassis construction for the rest of the car it would have been far too heavy. The only way to go with this heavy engine was to have very light components around it – that meant a carbon-fibre chassis. This was into the realms of Formula One technology, so I needed Formula One people on board. I needed 'ground effect' technology too. I looked around and found Tony Southgate who was exactly the person with the right credentials. He'd worked in Formula One for some time with BRM, Lotus, Shadow, and Arrows, and he was looking for a new project. We got together and pretty soon came up with the XJR-6 design.

"We were pretty familiar with the engine and during our touring car racing had identified most of the mistakes Broadspeed had made on the 'Big Cats' with it. We obviously had to make it a lot larger capacity for the new car to compete in Group C, but yes we understood the engine really well. With the big 'V' configuration it gave us enormous opportunity to have Venturi tunnels underneath the car to assist the 'ground effect'.

"Initially, I was asked to drive the cars, but I declined. I didn't believe anyone could take on the responsibility of overseeing the production of these cars and managing the budgets and people required to produce the cars and have the responsibility of driving them too. The team required someone at the helm available all of the time to discuss anything which may crop up over the race distance.

In return I wanted, from Jaguar, a budget sufficient for me to employ the services of ex-Formula One drivers who had come to an end of their career in that formula or who were looking for a new challenge. I also looked at drivers who were up and coming and capable of Formula One standards. We recruited drivers of the stature of Warwick, Cheever, Brundle, Lammers, and Boesel."

Formula One standards, strategies, and technologies were the hallmarks of the Walkinshaw way, even to the introduction of carbon-fibre. The TWR XJRs were the first sports cars to be made of such material, and to use Tom's words 'quite sophisticated thinking.'

"Like the XJ-S project we had made a promise to deliver a Le Mans victory for Jaguar within three years. We needed input from them as far as the engine was concerned to try

TOM WALKINSHAW

and reduce the weight of it and they needed us to put this new carbon-fibre chassis with all its Formula One technology together – it was a true partnership. We couldn't have done it without Jaguar and they couldn't have done it without us.

"We would visit Jaguar and see what they were doing with the engine and Jim Randall would visit us quite frequently to see what we were up to. It was a very, very good and close relationship between the two parties.

"We'd get a congratulatory phone call from John Egan if we won. On the other hand, if we lost we'd be summoned to his office, first thing on a Monday morning, to give explanations of what and how the hell things went wrong. It was something like being called to the headmaster when you were at school." When the new TWR XJR-6 took to the track for the first time in 1985 at Mosport, Canada, congratulations were certainly the order of the day as Martin Brundle swept into an early lead, and despite mechanical problems leading to retirement, the sister car finished third. Was this a surprise performance? "Not at all, no! I knew the performance of the car was very quick and superior to any of the opposition, so I wasn't at all surprised when Martin took the lead. What did concern me was we hadn't, in my view, done sufficient testing of a race distance. The Mosport race seemed to be upon us before we knew where we were. I knew that the car was very quick, all the data we had to that point suggested we were really fast, I was worried about the longevity of the car."

In the driver market, Tom Walkinshaw was a master, he had the ability to resurrect careers of those who'd fallen from favour after disappointing results in Formula One. Raul Boesel was plucked from the proverbial scrapheap and transformed into a championship winning driver. How did TWR do this?

"Raul was a good driver and did a good job for us. I'm of the belief that drivers often spark off of each other, he was in an environment with us where he was surrounded by good drivers and I think that brought the best out of him. He was in a team where both drivers, engineers, and the car around him gelled together. He became more confident, he wasn't always the quickest but became more consistent, and reaped the reward for some good driving."

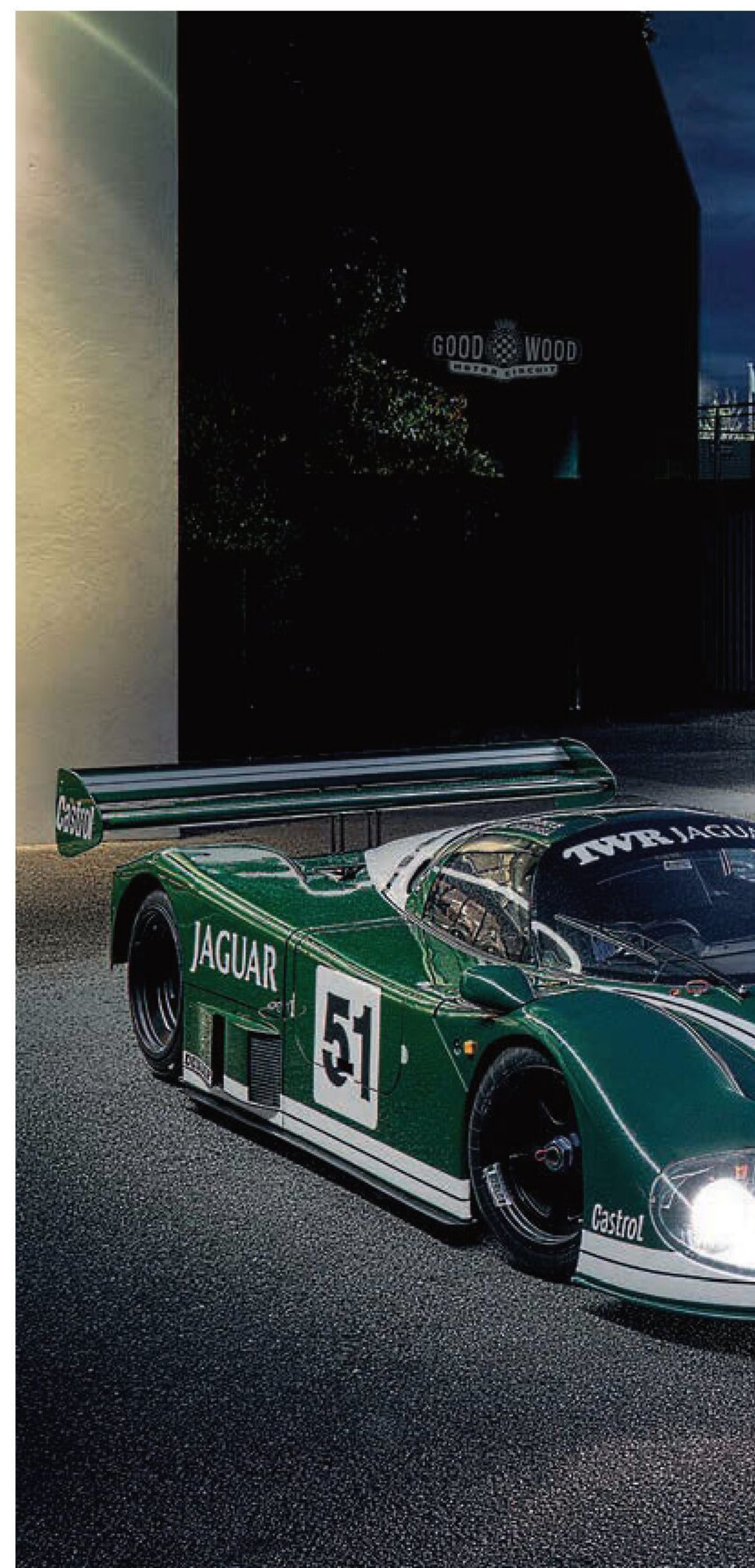
Young, talented drivers like Martin Brundle, of course, were on the TWR radar too: "We had Martin Brundle when he was a young driver. We supported him through the BMW County Championship and I part-sponsored him through his Formula Three car together with Eddie Jordan – when Martin was up against Senna. I had him drive for us in the XJ-S days and the XJRs and ultimately got him a drive in the Benetton team as team-mate to Michael Schumacher. So, we have a history of helping fledgling drivers too."

Andy Wallace, however, initially shunned the advances of TWR which was an obvious disappointment. "I think I probably was disappointed. I certainly didn't think – thank God he didn't sign! All we did was to target drivers we wanted and what have you – we certainly wouldn't want to stand in the way of a driver wanting to pursue a Formula One career."

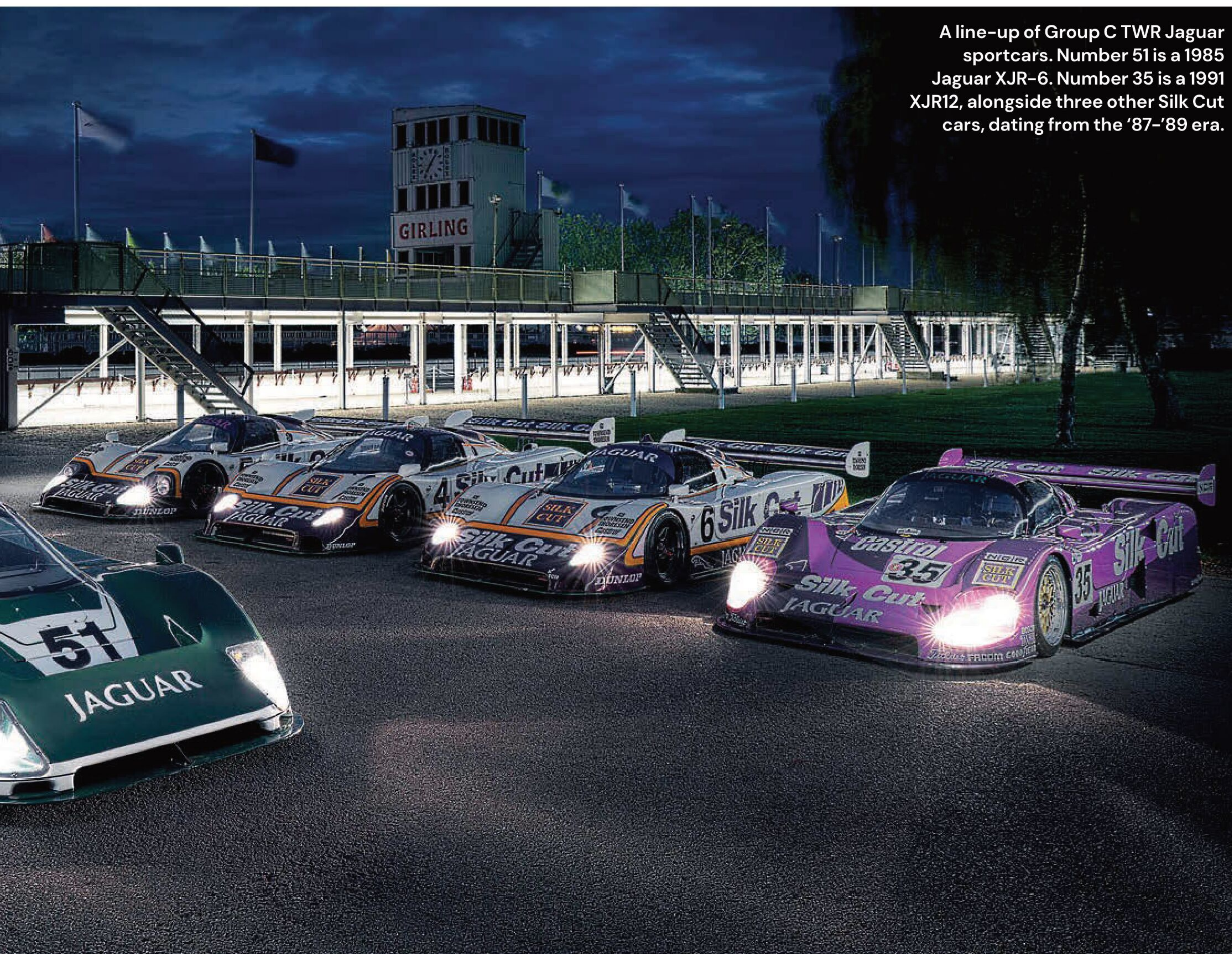
LE MANS 1988

Walkinshaw's finest hour has to be the 1988 Le Mans 24 hours, watching his 'cats' finishing line astern, although in first, fourth, and 16th places. What was the ultimate strategy?

"It was a totally unique environment for the team, we had 120 people and I had to know exactly where they were at any given time – we even had to have timed toilet breaks! If a car made an unscheduled pit-stop I had to know where key personnel were to deal with whatever problem the car



or driver had. Everything had to be under control – I suppose that's where I get a reputation for being a control freak. It is paramount to know where people are at any one time, essential for good teamwork, especially if you want to win. I can't begin to tell you how detailed the planning of this race was – it was minute." And the emotions during the podium celebrations? "I've never had an experience quite like it, not before or since. The British fans were fantastic they kept singing the national anthem, 'God Save the Queen'. They sang it when the music was playing for the podium and just continued to sing it time and time again. It was just phenomenal. We



A line-up of Group C TWR Jaguar sportcars. Number 51 is a 1985 Jaguar XJR-6. Number 35 is a 1991 XJR12, alongside three other Silk Cut cars, dating from the '87-'89 era.

had done the job we were hired to do, we had done it to the timescale we said we would do it in, but, to do it with all the British public behind you was just fantastic."

Derek Bell believed Jaguar had particular luck when Klaus Ludwig pushed the fuel envelope, trying an extra lap and running out. Would Jaguar still have won without that incident? "Yes, I think we were capable. We kept ramping up the pressure throughout the race. We told our drivers to push when it appeared the Porsche drivers were tiring, especially during the night sessions."

After the euphoria of the win, it was soon back to business. Mercedes, with Peter Sauber,

were hot on the pace too? "That's just motor racing, but Mercedes' people were completely different to race against than the Porsche people. They came up with different technical solutions to try and win; quite different to both Porsche and us. For drivers, they used youngsters wanting to ultimately go to Formula One like Schumacher, Wendlinger, and Frentzen. It led to all three teams, Mercedes, Porsche and TWR being very close in performance – each one of us raising the bar against the others. We tried our best to raise our bar high enough to win Le Mans again."

That second TWR Jaguar victory came at Le Mans in 1990 with the

XJR-12, but, was it just as sweet as 1988? "During the race the emotions were very similar and very draining, but you could never beat the scenes and the impact of that first win for us – which was completely mind blowing. The aftermath of the first win with masses of people flag waving and singing will always remain with me. So, yes, it was good to win the second time but, as I've said, those initial scenes couldn't be repeated."

Despite what some may think, Tom's last words to me aptly sum up the true spirit of the man: "You see, that's what it's all about, you're there to race, you're there to be professional, but you've got to enjoy yourself and have a bit of fun too!"



Return of the king

In 1988 Jaguar won the Le Mans 24-hour race for the first time in three decades. To celebrate this historic victory, we look at what made the winning car special and how Jaguar was finally able to vanquish the mighty Porsche team.

Words: Paul Walton

Epic. That's the only way to describe the Group C era of sportscars. With over 700bhp, 200mph-plus top speeds and big name drivers, between 1982 and 1993 the series was as popular as Formula One.

Although the World Sportscar Championship (WSCC) boasted

races all over the world, the jewel in its crown remained the 24 Heures du Mans. The historic race received more media coverage than any other WSCC event and was broadcast live globally. Over the punishing 24-hour schedule, cars could achieve some of highest speeds of any circuit (250mph on the Mulsanne Straight).

Dating back to 1923, Le Mans was still the race every team, driver and manufacturer wanted to win.

This was especially true of Jaguar, but for more emotional reasons. Despite not having a presence there since 1964 and Porsche becoming the dominant force throughout the 1970s and 1980s, many still



considered Le Mans as Jaguar's race, following its five wins in the 1950s. Jaguar's 1984 Le Mans Group C debut came thanks to Bob Tullius' Group 44 outfit. Following Tullius' successes in American motorsport during 1970s with the E-type V12 and then the XJS, Jaguar's then chairman (Sir) John Egan saw Group 44 as the

perfect team to take Jaguar back to competition and make a return to Le Mans. Jaguar chose long distance racing because it was an ideal way to demonstrate the durability of its products, something it badly needed in the early 1980s.

Sadly, success at the famous French endurance race in those early

years was hard to find. In the first year Group 44's two cars (XJR-5s) reached as high as sixth and seventh places and, following pit stops, Tullius even found himself briefly in the lead. But ultimately both cars retired. And although a Jaguar finished Le Mans for the first time in over 20 years in 1985, it was in 13th place.

XJR-9

In the same year, Tom Walkinshaw and his TWR team were taking both the driver's and manufacturer's championships in the European Touring Car Championship using the Group A Jaguar XJ-S. Thanks to this success, Jaguar soon changed alliances to TWR. It proved to be the right decision.

Jaguar secured the WSCC manufacturer's title in 1987 and Raul Boesel took the driver's crown the same year. All that was missing was a Le Mans victory. After a disappointing fifth place in 1987, TWR would stop at nothing the following year to take Jaguar's first Le Mans victory in three decades.

THE CAR

The basis for Jaguar's assault of the 1988 World Sportscar Championship and Le Mans itself was the XJR-8 that had proved to be so successful the previous year. Designed by a former BRM, Shadow, Arrows and Lotus designer, Tony Southgate, it was a big step forward in sportscar design. The main reason for this was the car's short tail, as Southgate explained in a 2008 interview. "In the 1980s," he

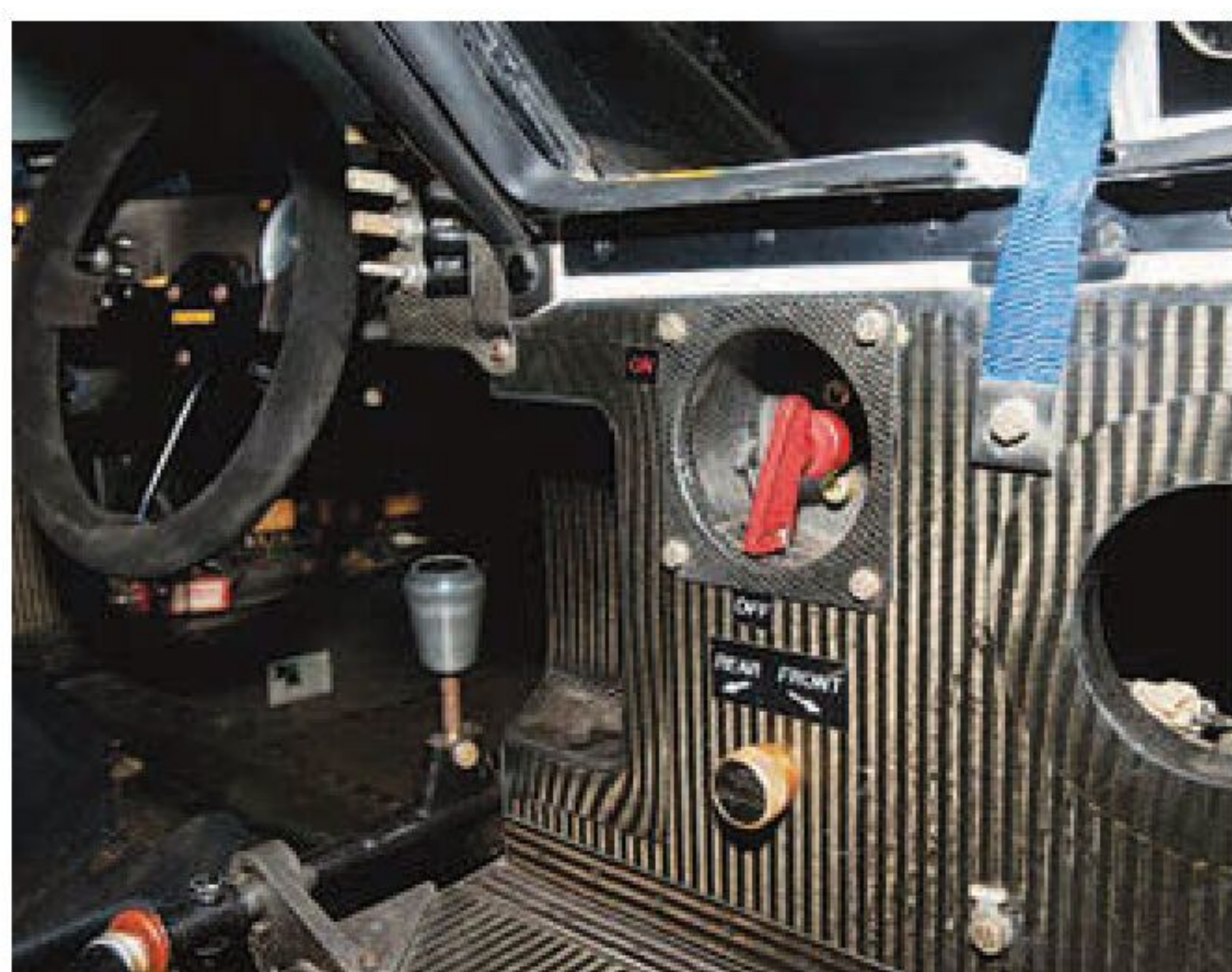


said, "all other Le Mans cars had long tails because that was seen as the way to achieve the long drag shape to go down the straight quickly. I wasn't too happy with this. And so I did a lot of wind tunnel testing and found that by chopping the tail short and mounting the wing very, very low I could get it to interact with the exit

to the venturi tunnel." (An area of low pressure that becomes a vacuum that sucks the car onto the track.)

Tony found that by positioning the rear wing correctly, it achieved enormous amounts of down force. The subsequent simple rear ends of his XJR racing cars puzzled the opposition, especially Porsche's





The XJR-9 has a simple interior – there were no digital readouts in 1988.

designers, since they couldn't understand how the Jaguars could go down the straight so quickly using what appeared to be a sprint car setup. "Aerodynamically," continued Tony, "the Jaguars were way ahead of the Porsches."

Yet this wouldn't be a simple update of the XJR-8 but a total reworking of the car, enough to warrant a new nomenclature – the XJR-9. Changes included a new cockpit ventilation duct fitted into the engine intake cutaway at the back of the monocoque roof and new endplates for the rear wing. Since the car also competed in the American IMSA series and ran on 17in wheels, for standardisation, the WSCC models would use the same. Smaller wheels meant smaller wheel covers and new lower profile engine cover panels. The dampers now sloped inwards and the engine positioning, floor panels and running gear were all modified.

Power, as it had done so from the start of TWR's Group C cars, was produced by a 7.0-litre, 720bhp version of Jaguar's V12 engine. Despite coming off the production line (although heavily modified and



XJR-9

The car's 720bhp V12 actually started life as a standard engine.



tuned by TWR's engine division), it made the car immensely strong, powerful and the XJR-9 could be driven fast over long periods of time. But as Walkinshaw – a former racing driver himself – told journalist Mike Jiggle not long before the Scot's death in 2010, that's what he wanted:

"My, and indeed TWR's, philosophy was always to build racing cars for racing drivers to drive. So, you have to build a car well enough for a driver to drive comfortably and drive the thing flat out. Some say endurance racing is like a marathon: pace yourself and it'll all come good in the end. I don't believe in that concept at all. My drivers needed a car to drive flat out from flag to flag – that's racing! With all our cars we either won or broke down. If we won, great. If we broke down, we'd sort out the problem for next time and we'd try, particularly in the early development days, to make any changes bombproof. When we went to a race our objectives were always pole position and a first place."

Thanks to the car's speed, the 1988 motorsport season started well for Jaguar with the pairing of Martin Brundle and Eddie Cheever winning three of the first four races (Jarama, Monza and Silverstone). But Le Mans was next. Could the XJR-9's winning

streak continue at the race that really mattered?

THE RACE

Not wanting to leave anything to chance, TWR fielded five XJR-9s (a couple were updated XJR-8s – see page 55) split between two teams (the WSC and IMSA outfits, both operated by TWR). To win, Jaguar needed to beat its traditional foe, the Porsche 962C (11 cars made up of three works cars and eight private entries) plus the up and coming Sauber team. Now with official Mercedes-Benz backing, the Sauber C9 had already shown its speed by winning the WSCC opener at Jerez in March. Sadly, the race would be denied a three-way fight. Following one of its cars suffering a major tyre blow out on the Mulsanne Straight, Sauber decided to withdraw both of its cars.

Qualifying saw the Porsche 962C of Hans Stuck take pole with a lap time of three minutes and 15.64 secs. Jaguar's best time was three minutes and 21.78secs by Martin Brundle, which put him fourth on the grid. Clearly, the Porsches had the legs over the Jaguars – could the difference be made up during the long race? The thousands of British supporters

(one of whom was JWM's Jim Patten – turn to page 55 for JP's account of the race) who had travelled to Le Mans hoped it could.

Following the race's traditional 3pm start, Stuck in the 962C number 17 took an early lead but the Jaguar of Brundle and John Nielson (no.1) slipped down the field. In an attempt





to find a setup quicker than everyone else, the anti-roll bar had been removed but the car had lost grip. But all was not lost. After qualifying sixth, Dutch driver Jan Lammers in XJR-9 number two (chassis 488) was third by the Mulsanne Corner and second by Indianapolis. According to teammate Andy Wallace, Lammers

– who had plenty of experience at Le Mans – decided to go for a softer setup at the rear that would prove to be right decision.

The cars ran in that order until the first round of pit stops and driver changeovers. Being able to go further on their fuel, the Porsche 962Cs pitted later than the Jaguars

but mistakenly they all came in at the same time, resulting in Johnny Dumfries – who had taken over from Lammers in the driver's seat of car two – taking first place. Following the second round of pit stops when again the Porsches went further, Dumfries – a former Lotus Formula One driver – was able to make up a comfortable cushion over the German cars after they had pitted. This was improved further when the lead 962C – now driven by Klaus Ludwig – stayed out too long between stops and almost ran out of fuel. Needing to coax his Porsche back to the pits, Ludwig lost two laps, giving a further on-track advantage to the XJR-9.

The works 962C of Vern Schuppan (no.18) took the lead thanks to its superior fuel economy but was soon overtaken by Lammers who was back in the XJR-9. The resultant laps were more like a sprint race than an endurance event, with Lammers and Schuppan taking and retaking each other, changing places three times on one lap alone. Sadly this was brought to a halt when Lammers collided with



Our objectives were always pole position and a first place

XJR-9

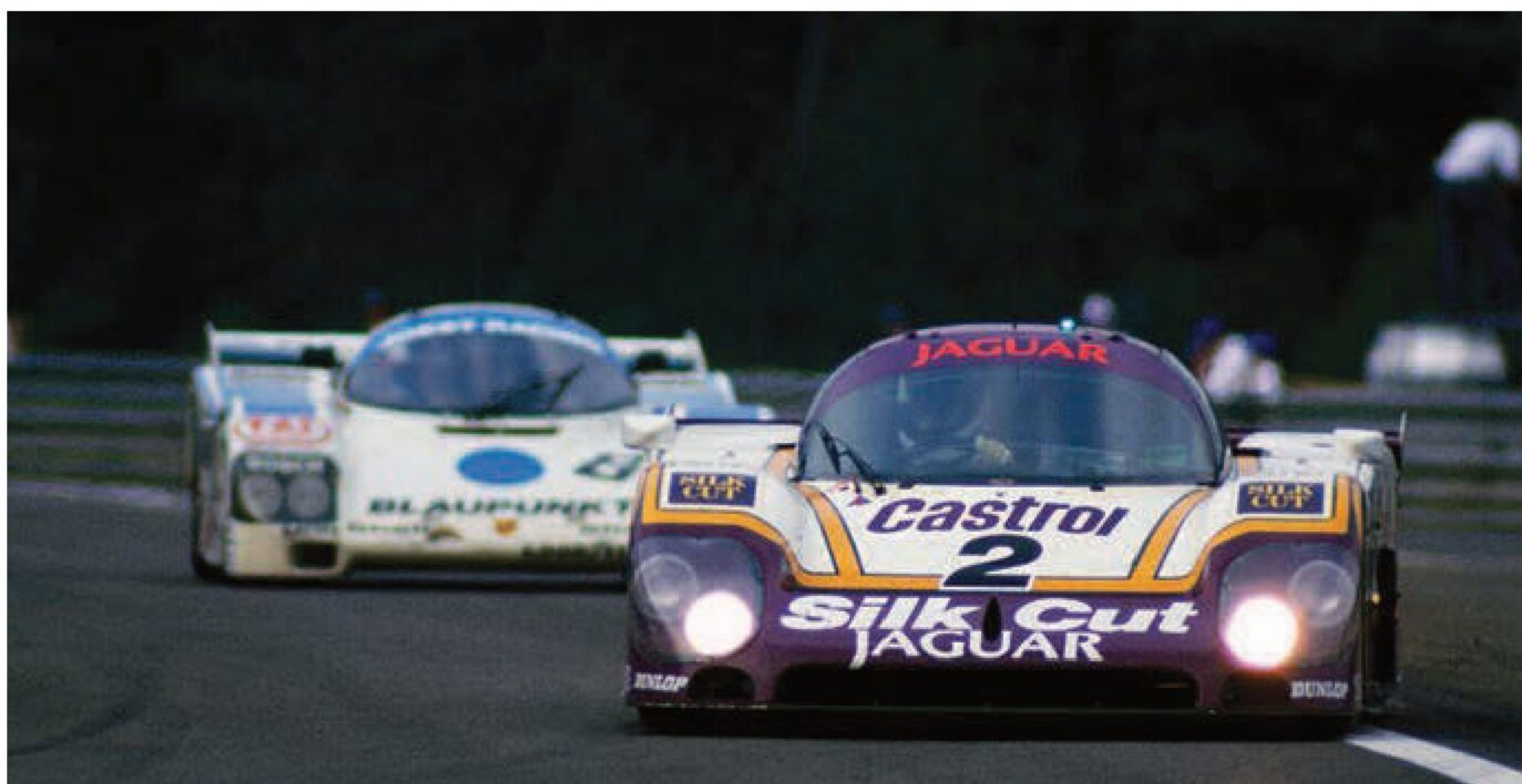
a privately entered Porsche and his XJR-9 was delayed by a minute in the pits to be repaired.

It was now Andy Wallace's turn behind the wheel of car number two. Thanks to a double shift, Wallace was able to close in on the leading Porsche. This was especially true on the Mulsanne straight. Aided by the extra power of the 962C's turbocharged flat six over the XJR-9's V12, coming off Tetra Rouge corner the German cars would quickly overtake the Jaguars on the Mulsanne Straight (the drivers would often give a little wave as they did so) and disappear into the distance. However, half way down the straight the more aerodynamic Jaguars would catch and overtake the Porsches. "Then we'd wave back," chuckles Wallace.

As a former Formula 3 driver, Andy found the XJR-9 very large but also very fast. It was also reasonably reliable, except for the five-speed gearbox. "With over 600lb ft of torque running through it, they were prone to breaking and so we were told to be gentle with the transmission," remembers Wallace today. And sure enough, the XJR-9 of Boesel/Watson/Pescarolo (no.3) retired near Indianapolis due to transmission failure. The XJR-9 of Sullivan/Jones/Cobb (no.21) that had been in third place suffered from gearbox problems, ending any hope of a podium finish.



The eventual winning XJR-9 (no.2) leads the pack (including sister Jaguars, 21 and 3, which would both suffer from gearbox issues) through the Dunlop Curves.



The Joest Racing 962C of Jellinski/Krages/Dickens chases down the winning XJR-9. The privately entered Porsche would cross the line in third place.

At 10pm Wallace swapped with Lammers who again closed the gap to the leading Porsche and just before midnight the Jaguar was back in the lead where it remained as dawn broke. Changing the windscreen at 6.30am delayed the leading Jaguar and put the Porsche of Stuck/Bell/Ludwig back in front, but this was short lived since the 962C's intercooler water pump needed to be replaced. Released from the pits, the Porsche drivers began a charge to catch Lammers' Jaguar – the XJR-9's lead was down to just 100 seconds.

With two hours to go, the Porsche was delayed again due to fuel pump



Jan Lammers in 488 crosses the line to take an historic win, closely followed by his teammates in case he needed a push due to an erratic gearbox. Over 200,000 spectators witnessed Jaguar's first at Le Mans in 31 years.

problems but Stuck soon unlapped himself. This was partly because the leading Jaguar was experiencing gearbox problems and it was touch and go whether it would reach the finish. With Lammers behind the wheel, it kept jumping out of gear. Knowing this is what happened before the car of Boesel retired earlier in the race, once Lammers found fourth he kept it there.

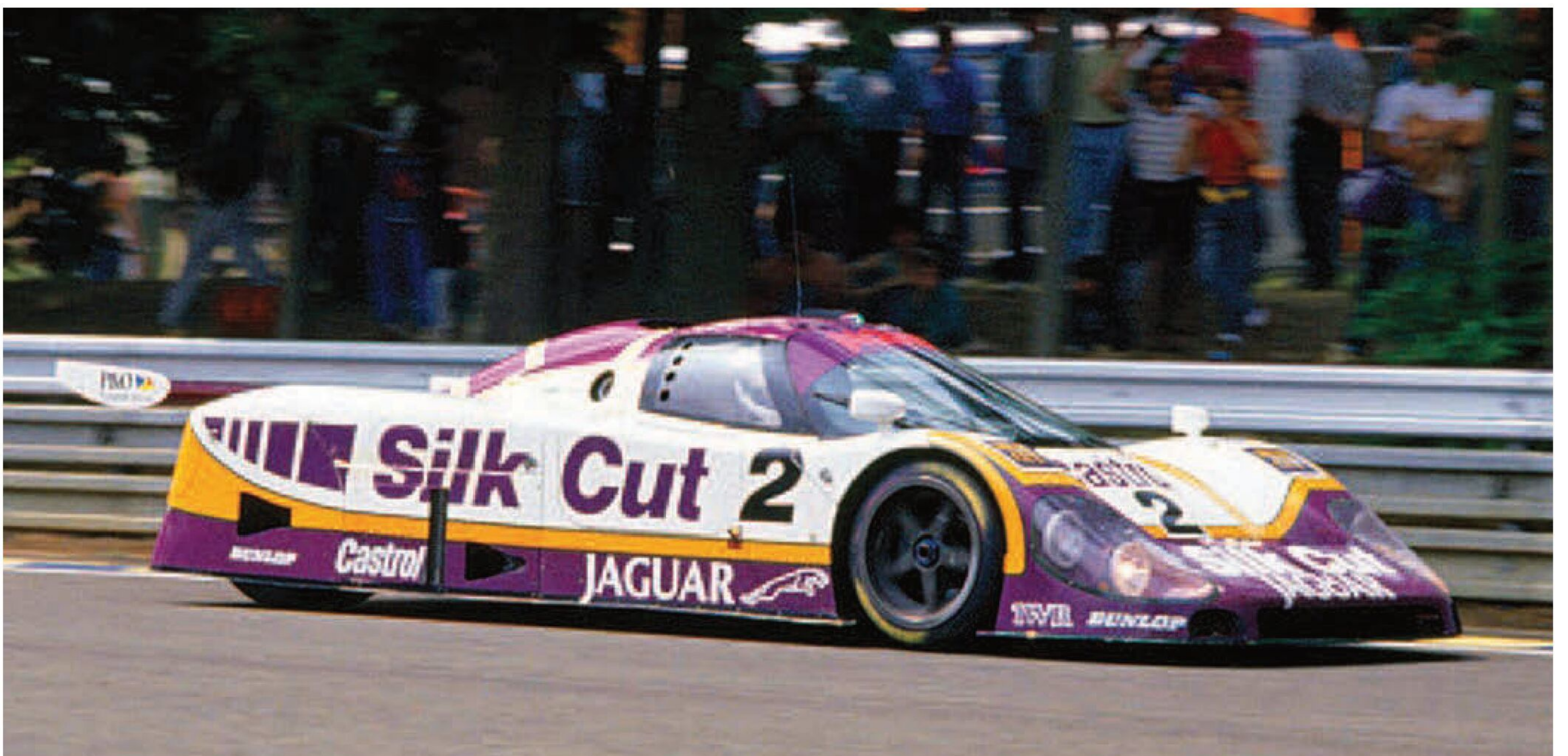
Not wanting to alert the

competition, Lammers never told his mechanics of the problem and when they saw him pull slowly away in fourth gear following a pit stop, they didn't say anything either. But with three laps to go, Lammers had to admit his problem. Walkinshaw – always a canny operator – wasn't about to let Jaguar's first Le Mans victory in 31 years for slip out of his fingers so he immediately radioed the other two Jaguars still running (number 22 driven by Daly/

Cogan/ Perkins that would eventually finish fourth and 21 of Sullivan/Jones/ Cobb) and ordered them to line up behind Jan. Walkinshaw's plan was this: if Lammers' transmission finally gave up, the other two Jaguars would physically push the car over the line. Who knows what the race officials would have made of that but thankfully they never needed to know. Much to the jubilation of the partisan British crowd, Lammers nursed his stricken XJR-9 over the finishing line just two minutes and 36.85secs in front of the hard charging Porsche 962C. The winning car completed 394 laps and covered a distance of 3313 (5332.79km), compared to 1957 when the winning D-type covered 2732 miles (4397km).

The '88 Le Mans victory was an amazing achievement for Jaguar. Despite the team's tiny size and budget compared to the massive Porsche outfit, it reiterated that Jaguar was a now force to be reckoned with, not just on the track but on the road as well. It may have taken over 30 years to achieve, but the king was back.

The big question is, when will it return?



The first Jaguar to win Le Mans in a generation – the XJR-9 chassis number 488

Electric Avenue

With the popularity of the FIA Formula E Championship growing, we get a behind the scenes tour and learn more about this exciting sport and Jaguar's entry.

Words Paul Walton

If you don't know about Formula E, it's an international motorsport series for single-seater racing cars organised by the FIA. Joining the competition for the 2016/17 season, it sounded exciting and perfect for a successful company like Jaguar, especially one with a rich history in motorsport. But, as its name suggests, Formula E cars are powered by electric engines – so the closest they get to cubic capacity is the drivers' drinks bottles.

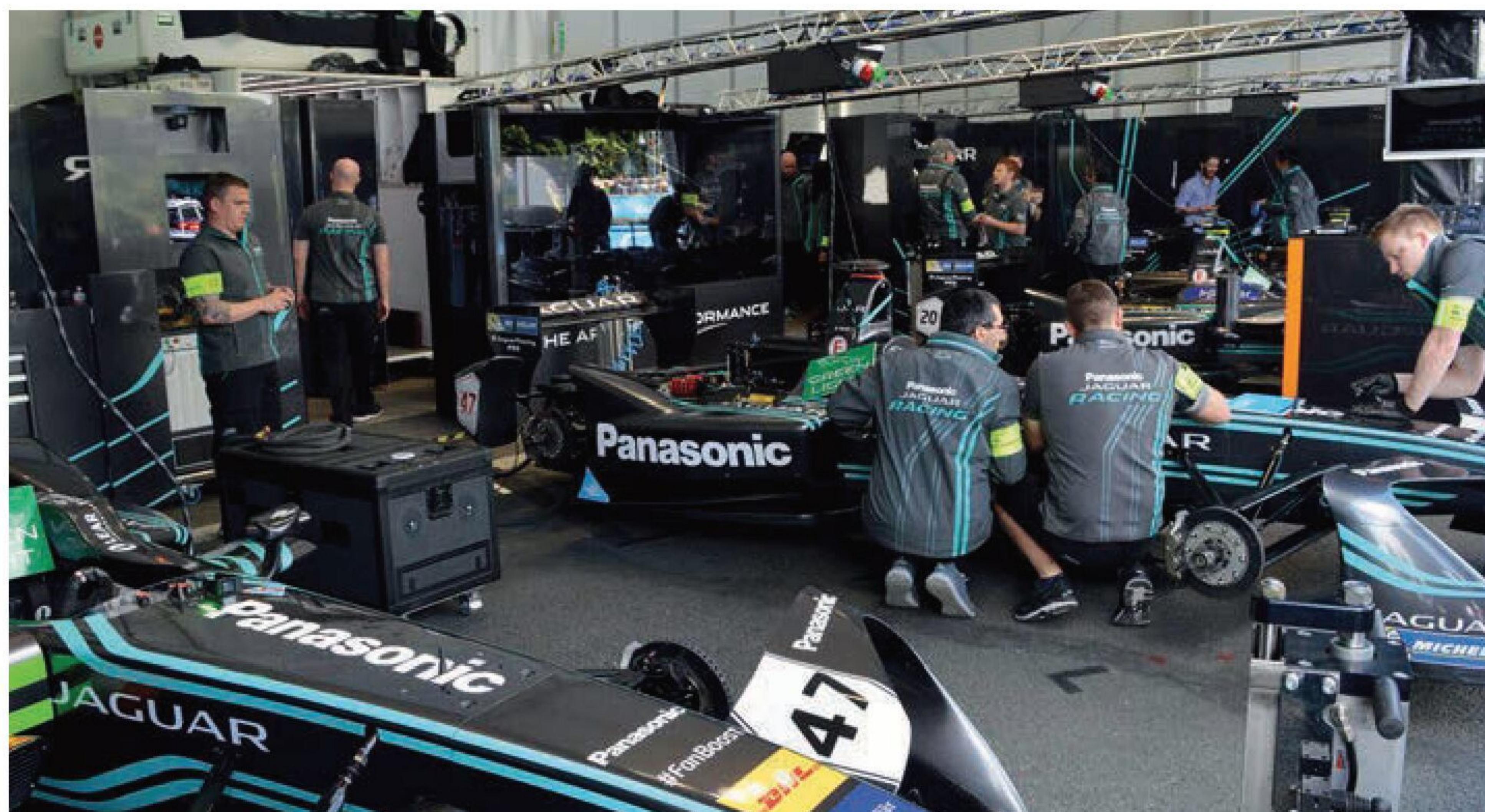
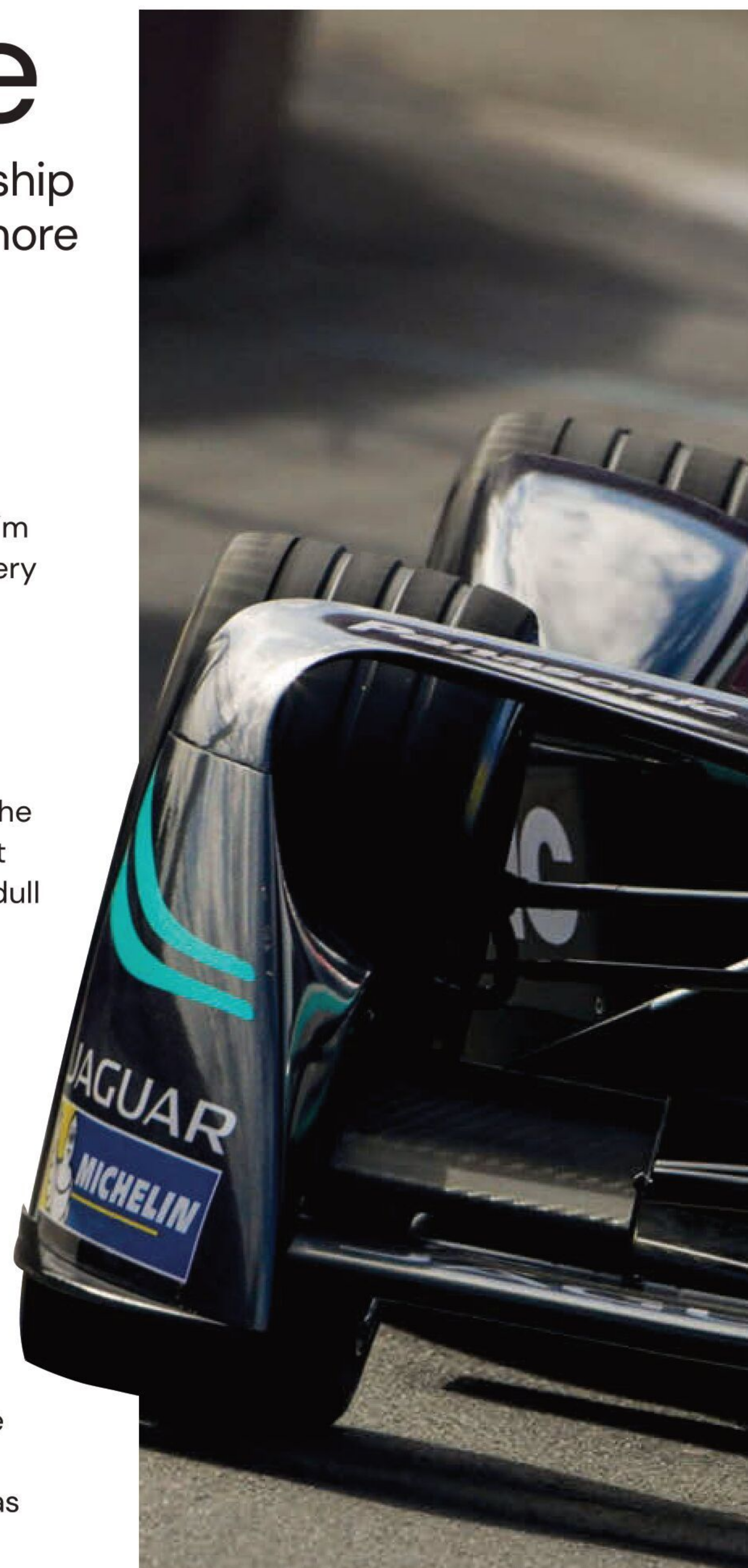
To give the series some credit, even since its first season in 2014/15, it has attracted big names in motoring, including Renault, Audi and Citroën, through its DS brand. The drivers are first class, too, boasting several from Formula 1 such as Nelson Piquet Jr, Sébastien Buemi and Lucas di Grassi. And to illustrate the championship's eco-friendliness, all the races, from Hong Kong to New York, are held on city centre circuits.

For the first two seasons, there was a London race, but sadly this was dropped for 2016/17. So, I headed to the closest race to home, Paris, to learn more about the series and

try to understand why Jaguar has decided to forego the history of Le Mans and go milk float racing.

Even before I've seen any cars, I'm impressed by the circuit. From every part of the 1.93km course around Paris' seventh arrondissement, which contains museums and monuments relating to France's military history, you can see the magnificent gold-topped roof of the Dôme des Invalides. It makes most circuits, such as Silverstone, look dull and soulless by comparison.

When I see the cars for the first time during Saturday morning practice, I have to acknowledge that they are exciting to watch. Light, agile and twitchy, they look like small Formula 1 cars as they bounce over Paris' uneven roads and, judging by how hard the drivers are fighting to keep them in a straight line, they are more than milk floats. Proper racing cars they may be, but they are quiet; the sound they produce is exactly the same as the remote control car I was given for my tenth birthday.





FORMULA E

The two Jaguars are striking, which is unsurprising since Jaguar's chief designer, Ian Callum, oversaw the livery. Although Jaguar calls its cars the I-TYPE, the chassis is actually the Spark SRT 01E that was designed and built by French racing car manufacturer Spark Racing Technology. For the first Formula E season in 2014/15, all teams had to use the same electric engine developed by McLaren, the battery system created by Williams Advanced Engineering, and a Hewland five-speed gearbox. However, for the 2015/16, season, teams were able to design and build their own motor. Said Panasonic Jaguar Racing director James Barclay before the season started, "They are the bits you can't see, such as the powertrain, which is pure Jaguar. The I-TYPE features a rechargeable

energy storage system (RESS) that propels an electric motor to produce the maximum output of 200kW, which equates to about 270bhp."

I make my way around the track to the pits, a series of huge marques on the Esplanade des Invalides. Despite cars coming in off the track, the experience is a far cry from when I visited the Jaguar Racing F1 team for the 2003 British Grand Prix. Back then, with engine oil being changed and the cars refuelled, the pits were hot, smelly and hectic. By comparison, Jaguar's Formula E mechanics work with calm efficiency, checking the two I-TYPE's systems in the same way an electrical engineer repairs your toaster.

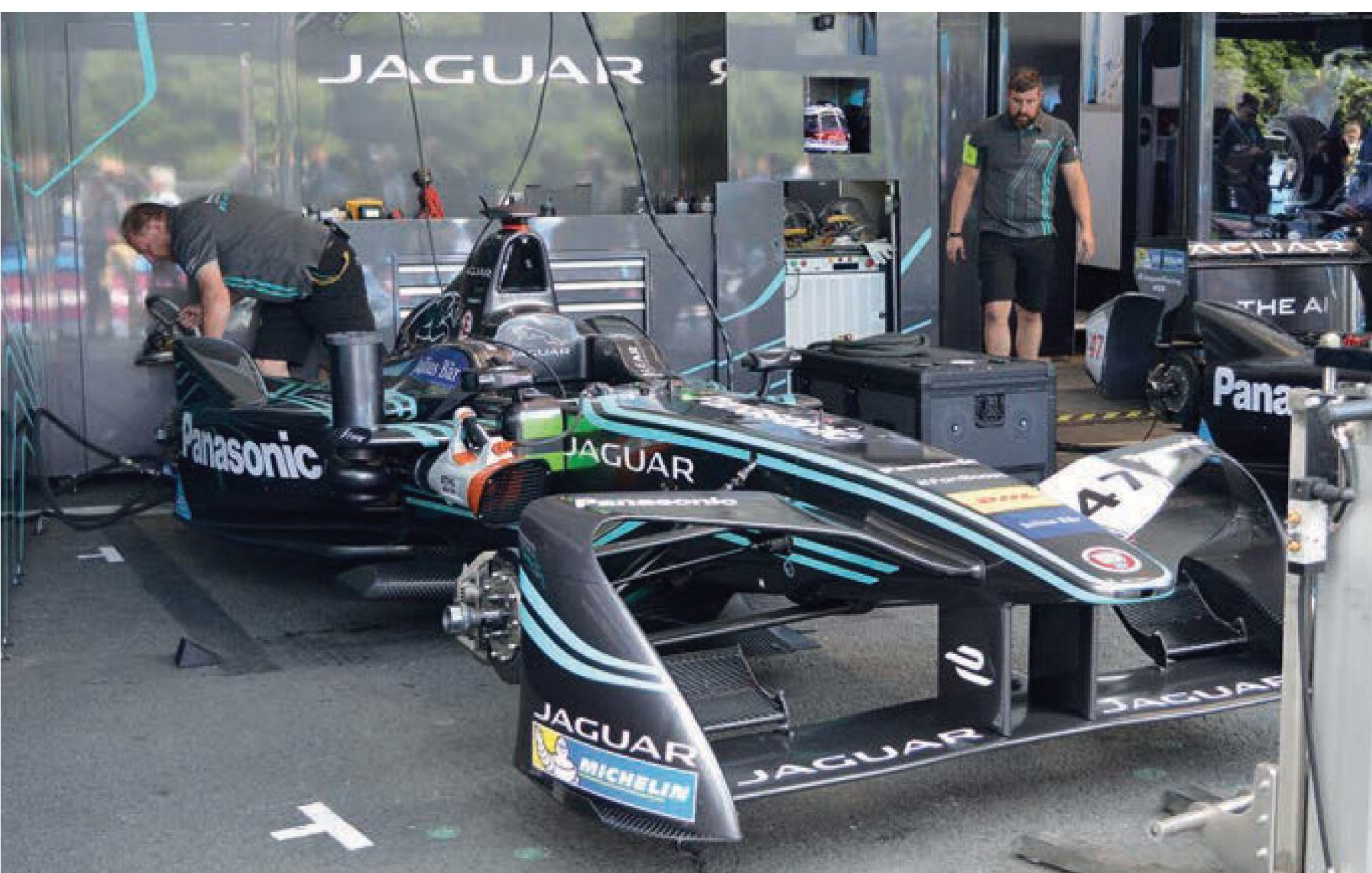
Contrary to its Fifties heyday, Jaguar has no racing department, so the current team is all new. But it is not alone because its technical partner is Williams F1, which offers

Jaguar unrivalled experience in front-line motorsport.

The team is headed by James Barclay, a former South African racing driver who joined Lotus Motorsport in 1999. He then moved to Bentley where he was involved in its 2003 Le Mans 24 Hours success from a marketing perspective. He spent 11 years at the British company and held roles including head of marketing for Asia and later North America. Barclay joined Jaguar Land Rover in 2012, becoming general manager of brand partnerships a year later, a role that has included JLR's involvement with the Rugby World Cup, the America's Cup with Ben Ainslie Racing and the James Bond film *Spectre*. He was appointed team director of Jaguar Racing in September 2015.

Jaguar Racing's drivers are a Brit, Sam Bird, and New Zealander

"Instead of the thunderous roar thumping towards me at the start of an F1 race, the sound is more akin to the Formula E grid playing host to a swarm of angry bees."





FORMULA E



Mitch Evans. Sam started his racing career in 2002, and went on to forge a successful record of results in the sport's junior categories before a number of key Formula 1 roles including testing duties for Williams and reserve driver for Mercedes AMG Petronas. Teammate Mitch started karting at the age of six and won the New Zealand Grand Prix at 16. Mentored by former F1 racer Mark Webber, the young driver won the 2012 GP3 title and came second in class at Le Mans 2015.

Formula E is limited to ten teams, which means that Jaguar Racing was only able to join the 2016/17 season due to the Trulli team folding before the end of the 2015/16 championship. This, in effect, gave Jaguar's rivals a two-year head start, so the Jaguar team worked hard to catch up; but it's finally seeing results.

The light bulb moment arrived while I explored the Formula E village

to discover an I-PACE on display. Since Jaguar put this handsome and all-electric SUV into production in 2018, Formula E has been the perfect platform to announce to the world that Jaguar is in the growing electric car market. "From our point of view, that's where we're going. So, absolutely, there's a plan in place [using Formula E] to communicate that" explains James Barclay before the race.

Barclay also reckons that Jaguar's involvement in Formula E will make the company's electric models more desirable, because people will associate them with performance. "From a consumer perspective, when you see technology that has been developed in racing it's clear that we're not just developing a car that's fantastic on range, it is also going to be great to drive and you will be able to push it in terms of performance."

There's another benefit too: racing will help to speed up development

of the electrical powertrains. Says Barclay, "When we looked at our options for a return to motorsport, Formula E was the perfect fit. Electrification will form a key part of Jaguar Land Rover's future road-car production plans – when we studied the Formula E set-up, it was clear that our R&D engineers would be able to draw from the technology powering Jaguar Racing." That intractable link between motorsport and road-car technology has always informed Jaguar. You only have to cast your eye back through the annals of its glorious victories at Le Mans in the Fifties.

Jaguar Racing's director, Craig Wilson, also confirms that engineers from the motorsport and automotive arms are actively sharing data, increasing the rate of development. "Clearly, with Formula E we're racing, so it's very competitive in all areas, but specifically there's



a big crossover [with automotive] in thermal management," he says. "There's a lot we can do with software and algorithms, and [in Formula E] we're learning a lot from braking regeneration and simulations."

"The automotive team are getting good information for protection systems around the high-voltage electrics to make sure we don't cause any trips or component failures from a reliability point of view. This information is being given back to the racing team."

Jaguar Racing's late entry into Formula E benefits the road division's work because the development pace on both sides is matched. Getting the team ready for Formula E was "a very aggressive, heads-down approach," says Wilson. "I-PACE is going through a similar journey with a dedicated project team, so there's definitely a good understanding between the two teams and how to optimise the work."

As I walk back to the grandstand at Turn 1 ready to take my seat for the race, it is incredible how

many spectators there are for this reasonably new sport. Plenty of well-known faces are among the crowd too, including current FIA president and brains behind the series, Jean Todt, plus former F1 drivers (and Williams teammates) David Coulthard and Damon Hill (who I literally bump into as they look for the start line). I consider asking if they recall giving me their autographs during a tour of the Williams factory in 1994, but they look busy.

It's race time. Unlike most other series, there is no warm-up lap. The drivers line up on a dummy grid and slowly file into position following a pace car for the race start. The lack of noise is striking. Instead of the thunderous roar thumping towards me at the start of an F1 race, the sound is more akin to the Formula E grid playing host to a swarm of angry bees. Yet it's an impressive sight as 20 multi-coloured racing cars silently whoosh passed, the treaded tyres making more commotion than the engines in their bid to find grip.



FORMULA E



I'm astounded by their speed, too. Formula E cars can each 62mph in three seconds and have a top speed of 140mph. Slow by F1 standards, but that's quick, especially on a narrow street circuit. As the cars enter Turn 1, competition is palpable: despite the track being narrow, none of the drivers give an inch and, after braking hard, they only just squeeze through the corner.

More used to F1's longer circuits, where it takes a few minutes for cars to reappear, I'm further surprised by how quickly the pack is in front of me again – not even 30 seconds – making the racing more exciting for spectators. It is also easier to follow than races held on long circuits, such as the 7km Spa-Francorchamps in Belgium.

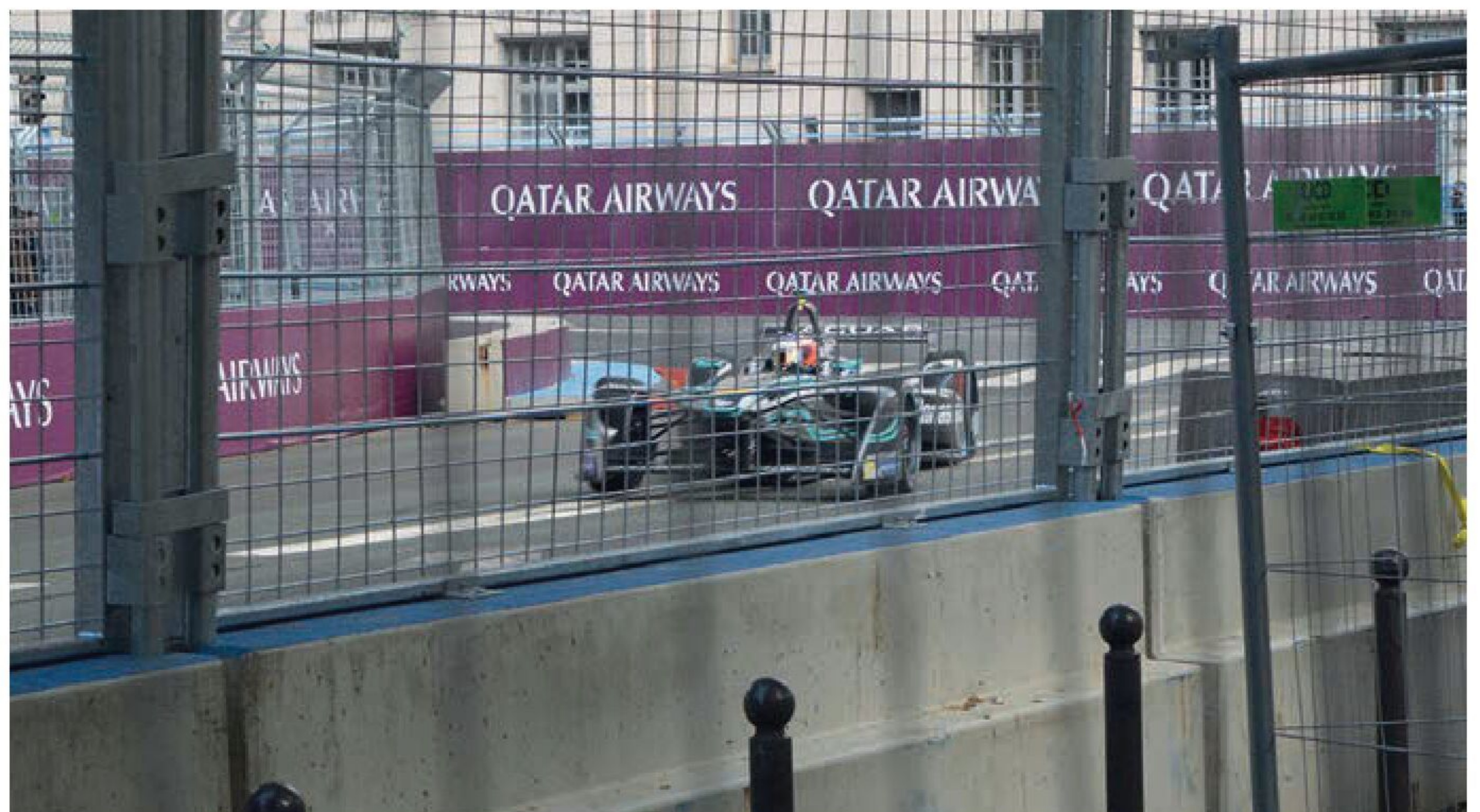
The enthusiastic crowd can also get directly involved, using FanBoost. Fans can give their favourite driver an extra speed boost by voting for them online prior to and during the opening six minutes of the race. The three drivers with the most

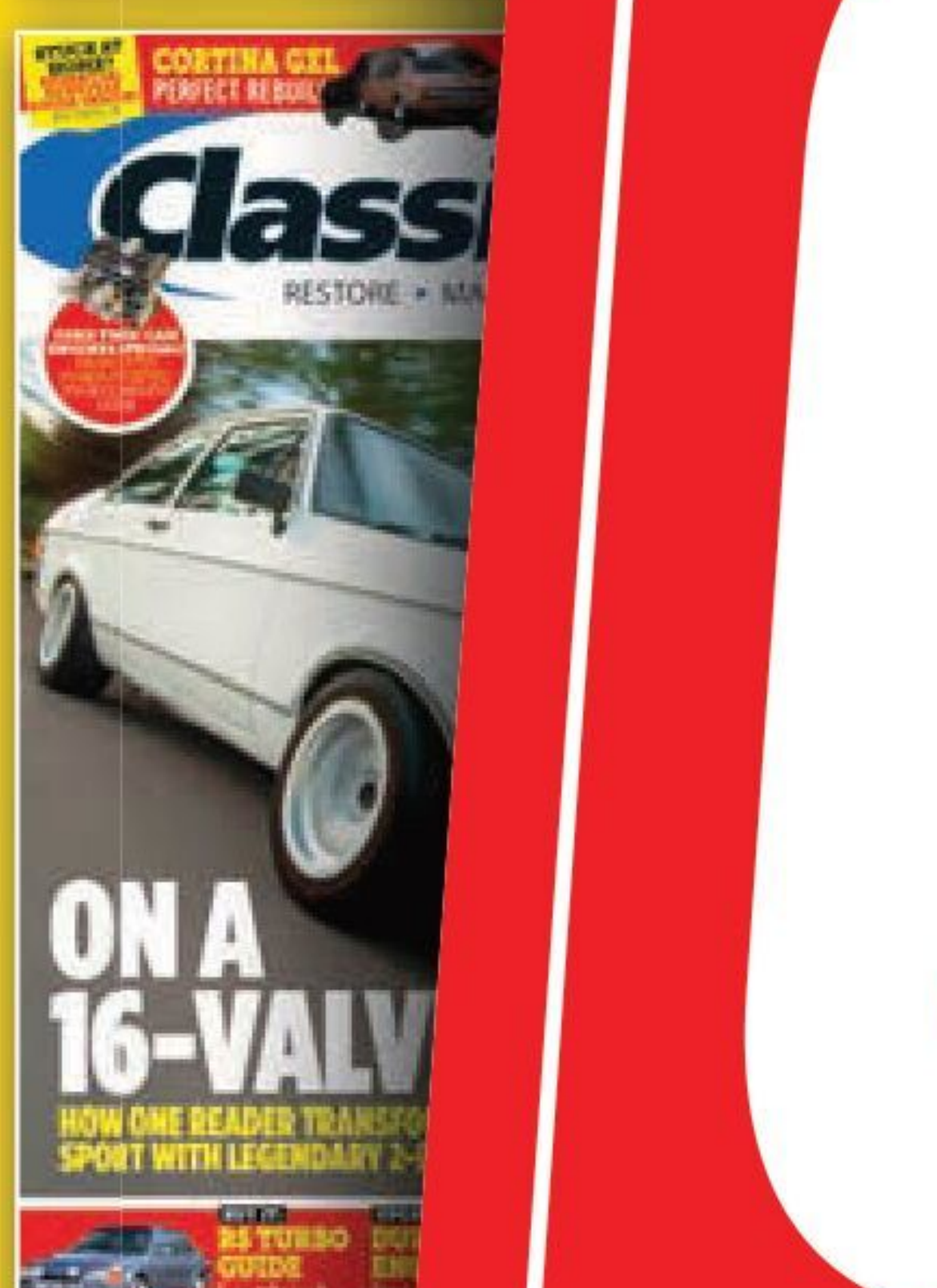
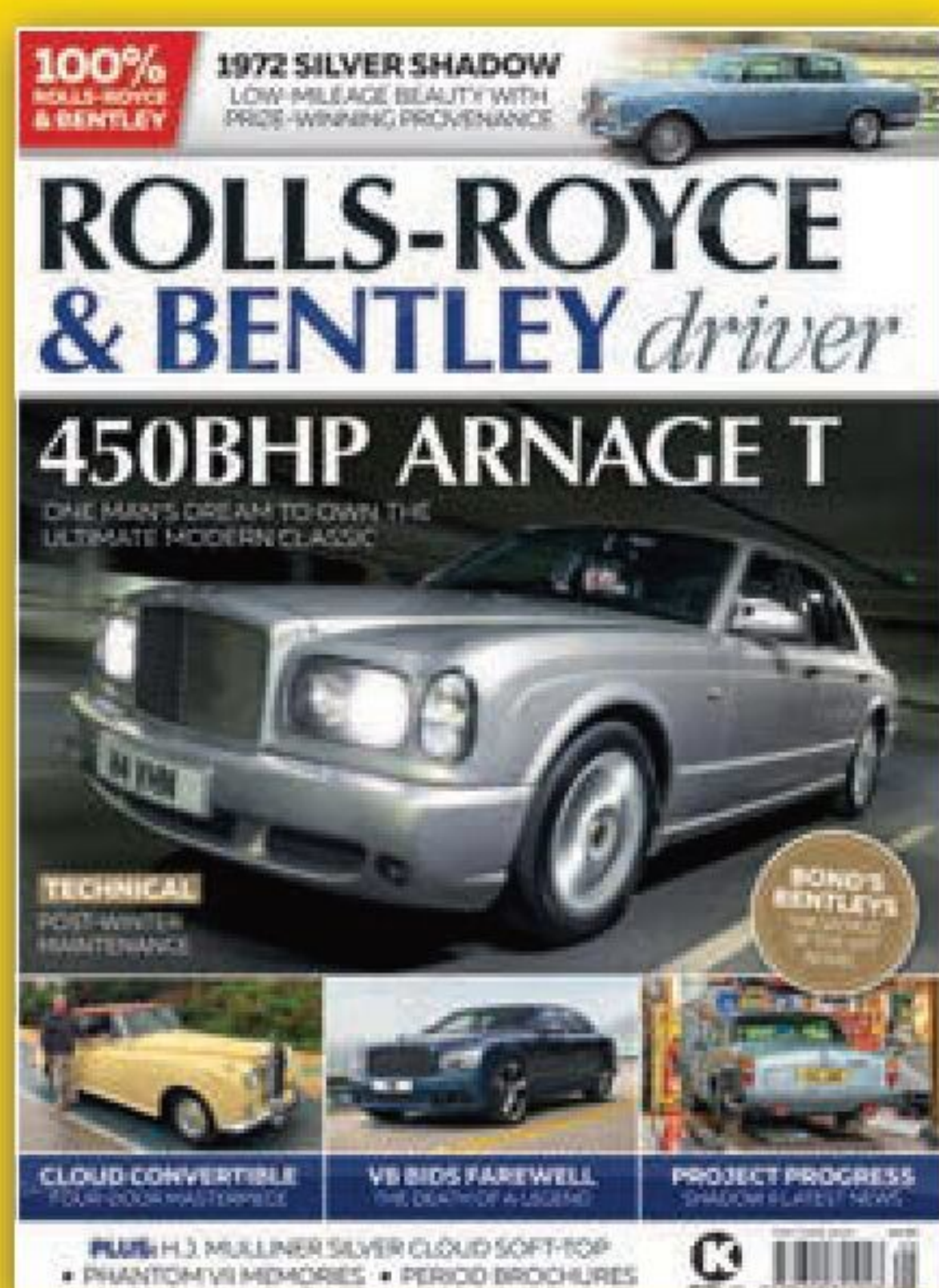
votes receive an additional 100kJ of energy to be used once in their second car.

Yes, second car. Since the batteries in Formula E's cars are currently unable to last the distance of a 50-lap race, every team needs to prepare another car for their drivers. During the race, drivers have to make a mandatory pit stop to change cars, which must take place in their own garage and be observed by

an FIA steward to ensure all safety equipment is correctly applied. A minimum time period of 70 seconds is also enforced.

Even without the roar from large combustion engines, the race was still extremely exciting and, ultimately, that's all that matters. As Jaguar has done many times in the past, I believe it will eventually win, both on the track and – with the electric vehicle offering – on the road, too.





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OFF THE WALL



If you watched Ewan McGregor and Charley Boorman's exciting journey as they travelled the 19,000 miles eastwards (the Long Way Round, 2004) from London through Asia and Alaska to New York City on BMW motorcycles, you might understand how Marko Fleming became inspired to do the same thing himself. But, instead of a bike, in 2005 the 18-year-old Fleming set off from his home in Fife, Scotland, driving a Ford Capri that he had prepared himself.

Although the epic journey ended early when his Capri was hit by another car – now repatriated and repaired – the Capri is a constant reminder of his first foray into adventure travelling. The adventure travel bug had hit.

Marko then spent six months in Mexico piling on the miles with a 1972 Mustang, and, in 2006, his Rust2Rome idea was born. He paid £250 for a Ford Granada 4x4 and, along with some friends in similar-priced cars,

drove through France and into Italy where they completed the trip.

Word got out about Marko's adventures and others wanted to join in the fun. Marko took it seriously, though, and set up the first of a series of trips that have since expanded into a very successful adventure touring company. Back then, the ethos was to pay no more than £250 for a car and set off on a trip with a banger. Today, destinations are as diverse as the Swiss Alps, French

Supershoppers

When Marko Fleming bought his Mk X rolling body for £50, he fitted a V12 with a five-speed gearbox and drove it to the Sahara.



Alps, Romania, the Sahara and Mexico (where classic American muscle cars are sourced and rented to entrants), but the allowance has been relaxed a little: now £500 is allowed for the car, plus some leniency on repairs.

Marko uses the sorts of car any entrant would, and has already undertaken trips in a black XJS. But, in the back of his mind there lurked thoughts of a MkX. He tracked down a good example and drove it for a year, but he decided it was too good

for his intentions. Then, in November 2016, he finally found the car he was looking for.

John at Jagspares International had told Marko about a car in his field that was covered in a thick layer of moss surrounded by high grass. For John, the value of the MkX was in the engine, so a deal was struck where Marko would remove the rolling bodyshell and later return the power plant. After some parts were traded, the final cost was £50.

Marko just loved the bog-like moss effect and decided to leave the body as it was and refrain from cleaning the growth, but would, through necessity, make the shell stronger than standard. He needed to, because back in his garage was an early 9:1 compression, flat cylinder head, 5.3-litre V12 engine, sourced from JagCats in Yorkshire.

Revelling under the pressure, Marko's 2017 schedule was to leave Scotland in April for a trip to the Sahara, and

OFF THE WALL



Low cloud in the Atlas Mountains, Morocco.

he was determined to take the MkX. Incredibly, once the tyres were inflated, it rolled around easy enough. It arrived at his Fife workshop on 16 December and work began in earnest on New Year's Day, 2017.

Organising the tour would be exhausting enough, but there was no question of travelling without the V12 MkX. He had just three months; and before anyone asks, yes, he has a girlfriend: Kelly throws herself into his crazy schemes with similar enthusiasm.

The MkX was in better shape than it had a right to be, given the field storage. Tape had been used to cover the door gaps, which kept the damp out, leaving the inside in reasonable condition. Splitting his time between

mechanical work and body, Marko switched from one task to another as parts supply dictated, multi-tasking while waiting for spares to arrive.

He was initially shocked when removing a wheel to see how bad everything looked. But it was just grime. With the front and rear axles removed, he could begin to overhaul them in between tackling the basic structure of the Jaguar. That proved to be extremely solid, with just a few holes underneath to repair.

The lower half of the inner and outer sills were repaired, but anything non-structural was left. Not only did this save time, but he also liked the rather shabby effect that contrasted nicely with the moss-covered body.



First taste of sand:
Pendine, in Wales.



Marko's father, John, also pitched in, providing his workshop and hands-on help. John would be doing the trip, too, in his own budget '95 Camaro.

Turning his attention to the engine and transmission, Marko had a five-speed Getrag gearbox already to attach. The engine came from an XJ12 that had been unused for years. It was removed from the car when he bought it, so was deemed to be a good one. As an upgrade, he used an Emerald K6 ECU for greater efficiency. Fortunately, others had done the V12 conversion, and Marko was indebted to Robert Hughes (not the classic car dealer) for advice. One tip was to remove the bonnet slam panel to make life easier when fitting the engine. Then, it was simply (if that is the right expression, given the



Speed on Pendine Sands.



OFF THE WALL

Reflectivemood for the trip ahead, at Pendine



circumstances) a case of raising the engine and gearbox into the waiting void to see what cleared and what touched. Marko further complicated things by deciding early on that he would eventually twin turbo-charge the engine, so he made sure there would be space in the lower bulkhead by cutting a 4.5in hole on each side ready to receive the mass the next time around. Various cuts were made into the inner wings and, once suitably extended, were then made good by welding. Engine and gearbox mounts were tailored to suit.

In view of the short time period, as much as possible was out-sourced. The differential was rebuilt to use a limited-slip 2.88:1 final drive, while the IRS cage was secured by

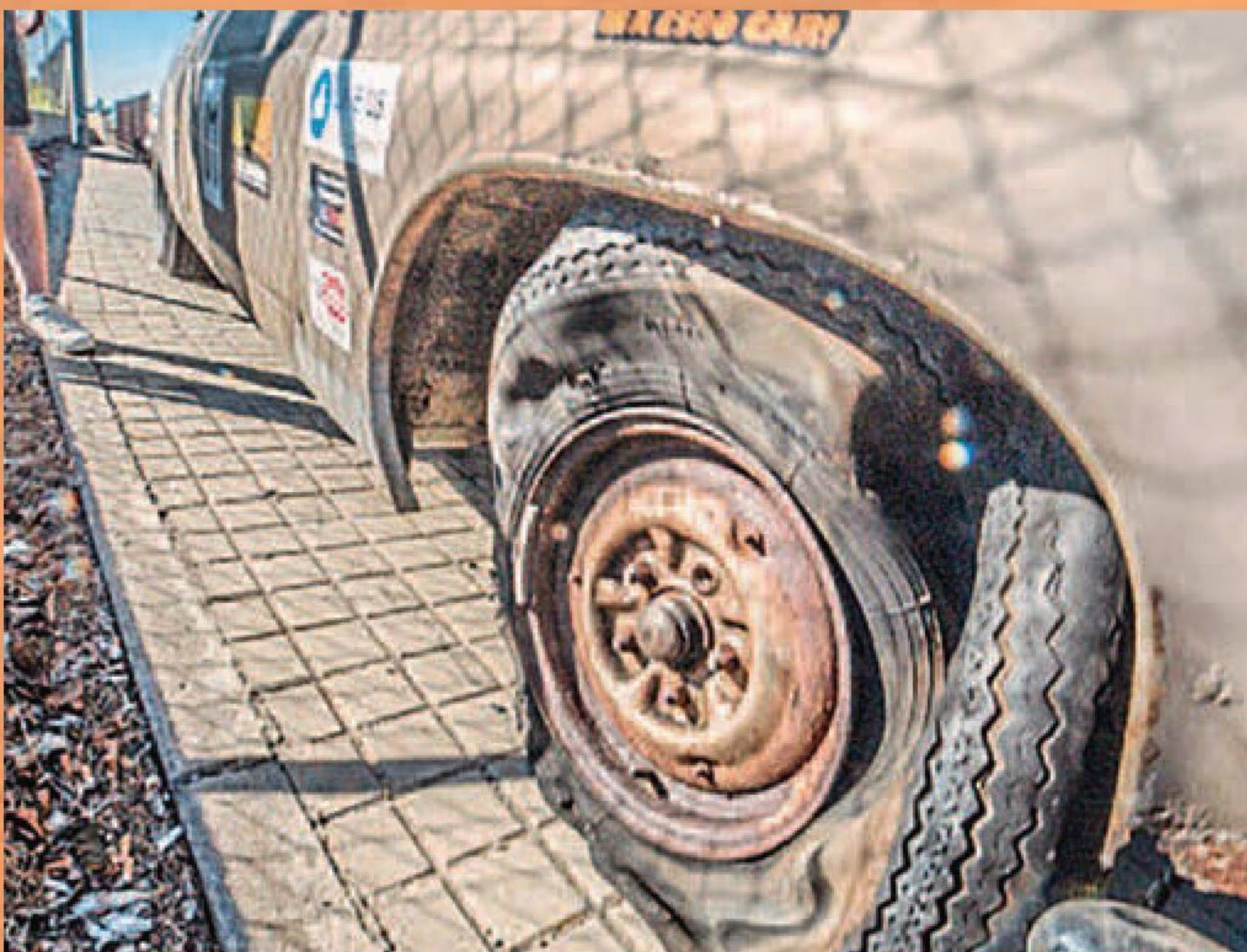
triangulating a fabricated mount, with both front and rear suspension assemblies solidly mounted. It might look strangely shabby on the outside, but suspension beams and cages are powder-coated for longevity.

Knowing that fuel would be used at a prodigious rate, Marko had an extra 110-litre tank fabricated from a 3D model he had made so that it would fit just behind the rear seats in the boot. The tank was right first time. This was plumbed in parallel with the existing side tanks.

However, Marko's most innovative development was something carried over from his XJS. Using adjustable dampers, he fabricated a tool, with a servo on each unit, to adjust the dampers from inside the car. With the

varying road conditions, being able to change the settings proves extremely useful. At this stage, though, he could only use the servos on the rear. The suspension was kept relatively standard, but everything was rebuilt. Lightweight E-Type wheels by Realm are fitted with Goodyear Eagle tyres. Air conditioning was always on the cards and most of the system was installed, but the essential evaporator failed to arrive in time. Another job for the future.

With Marko due to leave on Sunday, 2 April, the MkX passed its MOT on Saturday at two o'clock. He then went to prepare the final details for the other participants on the adventure to the Sahara, while his brother carried on working through the night.



Tyre trouble in Madrid.



Radiator trouble meant constant top-ups in Morocco.



Reflective mood for the trip ahead, at Pendine.

Trouble began on the way to the start-line as the MkX struggled to run at speed. Although it was a Sunday, he reached John Lamsley at Emerald, who managed to access the ECU via a laptop connected to a mobile hotspot. It ran much better afterwards, but was still not ideal. Eventually – when they had reached Spain–Marko traced the fault to a dislodged contact between the ECU and an injector. The car then picked up its tatty skirts and flew!

Starting at South Queensferry, 12 cars left for the ferry connection to Belfast. There, they took a Segway tour of the Titanic Quarter – one of the world's largest urban-waterfront regeneration schemes. The group then continued south through Ireland, enjoying the scenery before taking another ferry into Wales. Here, they had their first taste of driving on sand at the legendary speed record-breaking site of Pendine Sands. From there, it was an easy run to Plymouth and another ferry, this time to Spain, and onto a stopover in Madrid. It was here that Marko discovered that a drag link pin in the steering linkage had become loose. He managed an emergency repair in the hotel car park. The MkX was ripping its way through tyres – there

hadn't been time to properly sort the steering geometry.

From Spain, the compass readings were set south and into Morocco, where Marko sorted out some new tyres. The group were on the edge of their destination and ready for the Sahara, where they were to spend two nights camping under the big desert sky with its endless spectacle of stars.

The return journey was completely different, driving through France and into Holland, where they took the ferry from Amsterdam to Newcastle. They travelled through incredible scenery, and, despite the lowly costs of their cars, had some of the best driving ever. There was always a timely day off, too, where the lucky

teams could enjoy the local area, the less so make repairs to their cars. Every car made it back as the entrants rallied around to ensure everybody was okay. Marko made sure that the evenings were as much fun as the daytime, and, judging by the number of client re-bookings, everyone seems to have a great time.

Marko has shown how good a cheap Jaguar can be on these trips. A look on a popular online auction site reveals a good variety of Jaguars, all within budget. They might not all be pretty, but that isn't a requirement for these trips. If you feel like an adventure without the expense of the big classic car tours, this could be for you. It might just be a lot more fun, too.



En route from Dublin to Rosslare.

NEXT ISSUE



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From taking a 1940s saloon onto snow-covered mountain passes, to man-handling an XJ-S around the corners at Silverstone, this issue offers an overview of some of the 'best bits' of Jaguars being driven in anger.

This issue also looks at the iconic Le Mans victories and the cars involved. The C-Type of the early 1950s, followed by the dominating D-Type later that decade, before closing the Le Mans chapter with the development and race story of the XJR-9 racers of the 1980s, this issue has something for everyone.

